DOCUMENT RESUME

ED 273 857 CE 045 141

TITLE	Agricultural Occupations. Education for Employment Task Lists.
INSTITUTION	Lake County Area Vocational Center, Grayslake, IL.
SPONS AGENCY	Illinois State Board of Education, Springfield. Dept. of Adult, Vocational and Technical Education.
PUB DATE	86
NOTE	74p.; For other task lists, see CE 045 137-140.
PUB TYPE	Guides - Classroom Use - Guides (For Teachers) (052)
EDRS PRICE	MF01/PC03 Plus Postage.
DESCRIPTORS	Adult Education; *Agribusiness; *Agricultural Education; *Agricultural Machinery Occupations; Employment Potential; *Farmers; *Horticulture; Job Analysis; *Job Skills; Landscaping; Matrices; Occupational Clusters; Occupational Information; Off Farm Agricultural Occupations; Postsecondary Education; Program Content; Sales Workers; Secondary Education

ABSTRACT

The duties and tasks found in these task lists form the basis of instructional content for secondary, postsecondary, and adult occupational training programs for agricultural occupations. The agricultural occupations are divided into three clusters. The clusters and occupations are: agricultural business and management cluster (salesperson--animal-feed products, salesperson--farm equipment and supplies, fertilizer/chemical service worker, farmer--general, scout/pest control worker/agriculture), horticulture cluster (landscape laborer, landscape gardener/landscaper, horticultural worker, salesperson--horticulture and nursery products), and farm equipment mechanic. Matrices for each cluster list the duties and tasks and indicate which occupations include that duty or task. Each cluster also includes a list of employability skills that are important for all occupations. (YLB)

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Education For Employment Task Lists

Illinois State Board of Education

Adult Vocational and Technical Education

AGRICULTURAL OCCUPATIONS

U.S. DEPARTMENT OF EDUCATION
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Education For Employment Task Lists

Illinois State Board of Education

Adult Vocational and Technical Education

AGRICULTURAL OCCUPATIONS

AGRICULTURAL BUSINESS AND MANAGEMENT CLUSTER

Salesperson, Animal-Feed Products
Salesperson, Farm Equipment and Supplies
Fertilizer/Chemical Service Worker
Farmer, General
Scout/Pest Control Worker/Agriculture
*Employability Skills

*Employability skills are a vital component of vocational education programs and should be incorporated into each occupational task list.

AGRICULTURAL BUSINESS AND MANAGEMENT CLUSTER MATRIX

SA = Salesperson, Animal-Feed Products
SF = Salesperson, Farm Equipment and Supplies
FC = Fertilizer/Chemical Service Worker
FG = Farmer, General
SC = Scout/Pest Control Worker/Agriculture

FORMULATING LIVESTOCK FEEDING PROGRAMS

	SA	SF	FC	FG	SC
1 Evaluate livestock production records	X			X	
2 Assess livestock needs such as growing and fattening, nursing, production or special nutritional needs	X			X	
3 Identify feed formula for livestock needs	X			X	
4 Balance rations	X			X	
5 Substitute feed ingredients	X			X	
6 Mix feed additives and medications	X			X	
7 Analyze feed nutritional value	X			X	
8 Compute feed cost per pound gain	X			X	
9 Evaluate feeding program	X			X	
10 Plan feeding program	X			X	
11 Record daily feed consumption				X	

PERFORMING SALES DUTIES

	SA	SF	FC	FG	SC
1 Determine customer needs	X	X		X	
2 Locate merchandise	X	X	X		X
3 Compute sales tax	X	X			X
4 Complete sales slip	X	X			X
5 Inform customer of warranty and guarantee specifications	X	X			X
6 Close sale	X	X			
7 Conduct sale	X	X			
8 Complete business forms	X	X	X	X	X
9 Communicate orally with clients	X	X	X		X

PERFORMING SALES-RELATED DUTIES

	SA	SF	FC	FG	SC
1 Open store or department	X	X			
2 Process debit card sales transaction	X	X			
3 Process charge card sales transaction	X	X			
4 Package customer purchase	X	X			
5 Arrange delivery of merchandise	X	X			
6 Process customer complaints	X	X			
7 Close out cash register	X	X			
8 Close store or department	X	X			
9 Process customer related sales	X	X			
10 Process cash sales transaction	X	X			
11 Order supplies and stock	X	X		X	X
12 Process incoming order	X	X			
13 Return unuseable merchandise	X	X			
14 Code and date merchandise	X	X	X		
15 Label and price merchandise	X	X	X		
16 Update prices on merchandise	X	X			
17 Stock merchandise displays	X	X			

	SA	SF	FC	FG	SC
18 Store merchandise in storage area	X	X	X	X	X
19 Rotate supplies and stock	X	X	X	X	
20 Greet and meet people	X	X	X		X

MARKETING ANIMALS AND ANIMAL PRODUCTS

	SA	SF	FC	FG	SC
1 Plan marketing schedule				X	
2 Select markets				X	
3 Sort and mark animals for market				X	

PERFORMING PROMOTIONAL ACTIVITIES

	SA	SF	FC	FG	SC
1 Maintain customer file system	X	X	X		X
2 Plan territory management	X	X			X
3 Analyze and interpret market information	X	X			X
4 Prepare advertisements	X	X			
5 Conduct sales promotional meetings	X	X	X		
6 Identify potential buyers	X	X			
7 Provide technical assistance to customers	X	X	X		X
8 Plan a sales promotional meeting	X	X	X		

FINANCING THE AGRI-BUSINESS

	SA	SF	FC	FG	SC
1 Calculate net worth of machinery				X	
2 Calculate net worth of animals				X	
3 Calculate net worth of land				X	
4 Calculate operating expenses				X	
5 Prepare cash flow projections	X	X		X	
6 Prepare financial statements	X	X		X	
7 Interpret financial statements	X	X		X	
8 Prepare budget	X	X		X	
9 Develop credit plan	X	X		X	
10 Complete the business loan application process				X	
11 Prepare tax statements	X	X		X	
12 Calculate insurance needs	X	X		X	
13 Prepare depreciation schedule	X	X		X	
14 Prepare bank deposits	X	X		X	
15 Prepare cash flow statement	X	X		X	
16 Record accounts payable in computerized bookkeeping system	X	X		X	
17 Record accounts receivable in computerized bookkeeping system	X	X		X	

PERFORMING GENERAL OFFICE WORK

	SA	SF	FC	FG	SC
1 Establish filing system	X	X		X	
2 Establish file index	X	X		X	
3 File materials such as receipts, letters, documents, specifications and orders	X	X	X	X	X
4 Write field report (prepare reports)	X	X	X	X	X
5 Type reports	X	X	X	X	X
6 Process incoming mail	X	X		X	X
7 Process outgoing mail	X	X		X	X
8 Maintain mailing lists	X	X			X
9 Schedule appointments and meetings	X	X		X	X

	SA	SF	FC	FG	SC
10 Process incoming telephone calls	X	X	X	X	X
11 Process outgoing telephone calls	X	X	X	X	X
12 Duplicate materials	X	X			
13 Clean work area	X	X	X	X	X
14 Make minor office equipment repairs	X	X	X	X	X
15 Read crop pest management calendar		X	X	X	X
16 Collect pest samples for laboratory analysis			X	X	X
17 Read livestock pest management calendar	X			X	

MANAGING THE BUSINESS

	SA	SF	FC	FG	SC
1 Conduct periodic inspection of merchandise	X	X	X	X	X
2 Conduct inventory of merchandise	X	X	X	X	X
3 Maintain inventory records	X	X	X	X	X
4 Plan work schedule	X	X	X	X	X
5 Determine labor needs				X	
6 Evaluate employee performance				X	
7 Maintain quality control records	X	X	X	X	X
8 Evaluate agri-business productivity	X	X		X	
9 Supervise agriculture workers	X	X		X	
10 Prepare payroll	X	X		X	
11 Calculate payroll deductions	X	X		X	
12 Maintain production records				X	
13 Maintain animal records				X	
14 Maintain equipment records	X	X	X	X	X
15 Develop land use program				X	
16 Follow time management schedule	X	X	X	X	X
17 Follow work schedules	X	X	X	X	X
18 Purchase machinery and equipment				X	
19 Select computer software for records and reports				X	
20 Select computer software for livestock management decisions				X	
21 Select computer software for crop management decisions				X	
22 Select computer software for machinery management decisions				X	
23 Utilize a computerized network on agricultural marketing and management				X	
24 Utilize computerized inventory control system	X	X	X	X	X

ASSEMBLING, SERVICING AND MAINTAINING EQUIPMENT AND FACILITIES

	SA	SF	FC	FG	SC
1 Service business vehicle	X	X	X	X	X
2 Service conveyor equipment	X		X	X	
3 Clean and fumigate storage facility	X	X	X	X	
4 Maintain hand tools	X	X	X	X	X
5 Service electrical outlets and extensions	X	X	X	X	X
6 Assemble planting equipment		X		X	
7 Assemble tillage equipment		X		X	
8 Perform maintenance checks on equipment	X	X	X	X	X
9 Calibrate equipment	X	X	X	X	X
10 Maintain service records		X	X	X	X
11 Assemble applicating pumps		X	X	X	
12 Assemble boom type chemical equipment		X	X	X	
13 Change cartridge air filters		X	X	X	

	SA	SF	FC	FG	SC
14 Change nozzles on applicators		X	X	X	X
15 Check working condition of respirator		X	X	X	X
16 Clean granular application equipment		X	X	X	X
17 Clean liquid application equipment		X	X	X	X
18 Lubricate equipment			X	X	
19 Install spreader fan on shaft		X	X	X	
20 Install drive wheel on applicating equipment			X	X	
21 Paint equipment			X	X	
22 Replace bearings			X	X	
23 Replace belts			X	X	
24 Replace booms			X	X	
25 Replace drag chains			X	X	
26 Replace impeller pump			X	X	
27 Replace worn chain links			X	X	
28 Replace universal joints			X	X	
29 Repair electrical defects			X	X	
30 Troubleshoot equipment failure			X	X	
31 Prepare equipment for off season storage		X	X	X	
32 Service fuel systems			X	X	X
33 Service electrical systems			X	X	X
34 Service lubrication systems			X	X	X
35 Service cooling systems			X	X	X
36 Test engine compression			X	X	
37 Repair equipment utilizing shielded metal arc welding			X	X	
38 Repair equipment utilizing oxy-fuel (OAW) equipment			X	X	
39 Cut and pierce metal utilizing OAW equipment			X	X	
40 Cut and pierce metal utilizing SMAW equipment			X	X	

APPLYING FERTILIZERS AND CHEMICALS

	SA	SF	FC	FG	SC
1 Evaluate chemicals applied to test plots		X	X	X	X
2 Dispose of chemicals and containers according to manufacturers specifications			X	X	X
3 Prepare chemical program			X	X	X
4 Calculate application rates			X	X	X
5 Calculate proportions of chemical and carrying agents		X	X	X	X
6 Calibrate spraying equipment		X	X	X	X
7 Prepare fertilizer program		X	X	X	X
8 Map chemical applications		X	X	X	X
9 Formulate fertilizer		X	X	X	
10 Test soil		X	X	X	
11 Compute fertilizer costs		X	X	X	
12 Make fertilizer and lime recommendations		X	X	X	
13 Compute chemical costs		X	X	X	X
14 Identify fertilizer injury		X	X	X	X
15 Time fertilizer and chemical applications		X	X	X	X
16 Maintain chemical files		X	X	X	X

MAINTAINING AND CONSTRUCTING STRUCTURES

	SA	SF	FC	FG	SC
1 Plan building construction		X		X	
2 Construct concrete floors and foundations			X	X	
3 Construct wooden fence				X	
4 Construct wire fence				X	
5 Construct gates				X	

		SA	SF	FC	FG	SC
6	Install gates				X	
7	Perform maintenance inspection of facilities	X	X	X	X	
8	Repair roofing and gutters			X	X	
9	Repair siding			X	X	
10	Repair doors and entry ways			X	X	
11	Paint exterior surfaces of buildings			X	X	
12	Paint interior surfaces of buildings			X	X	
13	Repair and glaze windows and/or greenhouse lights			X	X	
14	Service electrical systems of buildings			X	X	
15	Maintain ventilation systems of buildings			X	X	
16	Maintain water system			X	X	
17	Service livestock feeding equipment	X			X	
18	Service livestock watering equipment	X			X	
19	Lay out building using transit				X	
20	Layout conservation structures using transit				X	

GROWING CORN, SOYBEANS, SMALL GRAINS, OR FORAGE CROP

		SA	SF	FC	FG	SC
1	Plan planting schedules			X	X	
2	Select seed varieties		X		X	
3	Select planting date			X	X	
4	Prepare seed bed		X		X	
5	Select planting method		X		X	
6	Plant seeds				X	
7	Select pest control program		X	X	X	X
8	Monitor plant growth				X	X
9	Spray crop for pest control			X	X	X
10	Cultivate crop				X	
11	Determine number of forage crop cuttings				X	

HARVESTING AND STORING CROPS

		SA	SF	FC	FG	SC
1	Harvest beans, corn, and small grains				X	
2	Dry and store beans, corn, and small grains				X	
3	Harvest forage crops				X	
4	Store forage crops				X	
5	Monitor moisture content of stored crops	X			X	
6	Determine marketing strategy	X			X	
7	Transport crops to market				X	
8	Test grain for moisture content	X			X	

BREEDING, HANDLING, AND CARING FOR ANIMALS

		SA	SF	FC	FG	SC
1	Inseminate animals artifically				X	
2	Pregnancy test animals				X	
3	Assist animals in delivery				X	
4	Assist young to nurse				X	
5	Castrate animals				X	
6	Dehorn animals				X	
7	Control building temperature				X	
8	Control building ventilation				X	
9	Control building lighting				X	
10	Restrain animals				X	
11	Evaluate animals for registry				X	
12	Mark or tag animals for identification				X	

MAINTAINING ANIMAL HEALTH

	SA	SF	FC	FG	SC
1 Inspect animals for disease				X	
2 Identify ailments in animals	X			X	
3 Administer medication				X	
4 Control parasites (external or internal)				X	
5 Treat wounds				X	
6 Disinfect buildings and equipment				X	
7 Deworm animals	X			X	

SCOUTING FIELDS FOR WEED, DISEASE, INSECT OR OTHER DAMAGE

	SA	SF	FC	FG	SC
1 Scout fields for weeds			X	X	X
2 Map fields for weed location and severity of weed pressure			X	X	X
3 Collect and prepare weed plant samples for laboratory identification			X	X	X
4 Identify weeds		X	X	X	X
5 Scout fields for plant disease damage			X	X	X
6 Collect plant disease specimens			X	X	X
7 Identify plant diseases		X	X	X	X
8 Scout fields for insect and pest damage			X	X	X
9 Map fields for insect and pest damage location and severity of problem			X	X	X
10 Identify crop insects and pests		X	X	X	X
11 Collect insect specimens for identification			X	X	X
12 Estimate crop loss due to hail or insect damage			X	X	X
13 Take and prepare soil samples for nematode identification			X	X	X
14 Complete plant specimen data form			X	X	X
15 Set out insect traps					X
16 Monitor insect traps					X
17 Estimate and monitor insect populations				X	X
18 Identify visually herbicide injury of plants		X	X	X	X
19 Collect samples of herbicide injured plants			X	X	X
20 Identify visually injury of plants due to herbicide residues in the soil		X	X	X	X
21 Keep records of scouting visits by completing scouting forms			X	X	X
22 Collect plant tissue for nutrient analysis			X	X	X
23 Identify various crops		X	X	X	X
24 Determine crop rotations			X	X	X
25 Estimate crop yields			X	X	X
26 Identify planting problems		X	X	X	X
27 Evaluate soil conditions		X	X	X	X
28 Make recommendations for fungus control		X	X	X	X
29 Make recommendations for insect control		X	X	X	X
30 Make recommendations for weed control		X	X	X	X
31 Make recommendations for disease control		X	X	X	X

LOADING, SECURING, TRANSPORTING, AND UNLOADING AGRICULTURAL PRODUCTS

	SA	SF	FC	FG	SC
1 Prepare truck			X	X	
2 Load livestock				X	
3 Restrain livestock				X	
4 Transport livestock				X	

	SA	SF	FC	FG	SC
5 Monitor condition of livestock in transit				X	
6 Unload livestock				X	
7 Load grains such as corn, wheat and soybeans	X			X	
8 Unload grains	X			X	
9 Load baled crops such as alfalfa and straw				X	
10 Unload baled crops				X	
11 Load products such as fertilizer and chemicals			X	X	
12 Load farm machinery		X	X	X	
13 Unload farm machinery		X	X	X	

APPLYING SAFETY PRACTICES

	SA	SF	FC	FG	SC
1 Comply with shop and equipment safety rules			X	X	
2 Apply basic emergency first aid techniques	X	X	X	X	X
3 Complete accident report			X	X	
4 Inspect work area and equipment for safe working environment			X	X	
5 Use fire extinguisher	X	X	X	X	X
6 Correct safety hazards			X	X	
7 Demonstrate cardiopulmonary resuscitation (CPR) techniques	X	X	X	X	X
8 Comply with safety requirements for working around automated systems	X	X	X	X	
9 Participate in safety training program	X	X	X	X	X

EMPLOYABILITY SKILLS

DUTY A: Identifying Employment Opportunities

SKILLS:
1 Identify requirements for job
2 Investigate educational opportunities
3 Investigate occupational opportunities
4 Locate resources for finding employment
5 Confer with prospective employers
6 Identify job trends

DUTY B: Applying Employment Seeking Skills

SKILLS:
1 Locate job openings
2 Document skills and abilities (resume)
3 Prepare for interview
4 Participate in interview
5 Complete required tests
6 Complete required forms
7 Write application letter
8 Write follow-up letter
9 Write acceptance letter
10 Evaluate job offer
11 Evaluate job rejection

DUTY C: Interpreting Employment Capabilities

SKILLS:
1 Match interest to job area
2 Match aptitudes to job area
3 Verify abilities
4 Identify immediate work goal
5 Develop career plan

DUTY D: Demonstrating Appropriate Work Behavior

SKILLS:
1 Exhibit dependability
2 Demonstrate punctuality
3 Follow rules and regulations
4 Recognize the consequences of dishonesty
5 Complete assignments in accurate and timely manner
6 Control emotions
7 Assume responsibility for own decisions and actions
8 Exhibit pride and loyalty
9 Exhibit ability to handle pressures and tensions
10 Demonstrate ability to set priorities
11 Demonstrate problem-solving skills

DUTY E: Maintaining Safe and Healthy Environment

SKILLS:
1 Comply with safety and health rules
2 Select correct tools and equipment
3 Utilize equipment correctly

4 Use appropriate action during emergencies
5 Maintain clean and orderly work area
6 Demonstrate personal hygiene and cleanliness

DUTY F: Maintaining Business-Like Image

SKILLS: 1 Participate in company or agency orientation
2 Demonstrate knowledge of company or agency products and services
3 Exhibit positive behavior
4 Read current job-related publications
5 Support and promote employer's company image and purpose
6 Maintain appearance to comply with company standards

DUTY G: Maintaining Working Relationships with Others

SKILLS: 1 Work productively with others
2 Show empathy, respect and support for others
3 Demonstrate procedures and assist others when necessary
4 Recognize, analyze and solve or refer problems
5 Minimize occurrence of problems
6 Channel emotional reaction constructively

DUTY H: Communicating on the Job

SKILLS: 1 Read and comprehend written communications and information
2 Use correct grammar
3 Speak effectively with others
4 Use job-related terminology
5 Listen attentively
6 Write legibly
7 Use telephone etiquette
8 Follow written and oral directions
9 Ask questions
10 Locate information in order to accomplish task
11 Prepare written communication
12 Utilize keyboarding skills
13 Utilize computer skills

DUTY I: Adapting to Change

SKILLS: 1 Recognize need to change
2 Demonstrate willingness to learn
3 Demonstrate flexibility
4 Participate in continuing education
5 Seek work challenges
6 Adjust career goals/plan as needed

DUTY J: Understanding How a Business Works

SKILLS:
1 Recognize the role of business in the enterprise system
2 Identify general responsibilities of employees
3 Identify general responsibilities of management/employers
4 Investigate opportunities and options for business ownership
5 Identify planning processes needed to open a business
6 Participate in meetings

DUTY K: Performing Mathematical Skills

SKILLS:
1 Apply mathematics for problem solving
2 Add and subtract whole numbers, decimals and fractions
3 Multiply and divide whole numbers, decimals and fractions
4 Convert numbers between forms expressed as fractions, decimals and percents
5 Convert between standard American units of measure
6 Convert between standard American units and metric units

Employability skills are a vital component of vocational education programs and should be incorporated into each occupational task list.

DUTY A: Formulating Livestock Feeding Programs

TASKS:
1 Evaluate livestock production records
2 Assess livestock needs such as growing and fattening, nursing, production or special nutritional needs
3 Identify feed formula for livestock needs
4 Balance rations
5 Substitute feed ingredients
6 Mix feed additives and medications
7 Analyze feed nutritional value
8 Compute feed cost per pound gain
9 Evaluate feeding program
10 Plan feeding program

DUTY B: Performing Sales Duties

TASKS:
1 Determine customer needs
2 Locate merchandise
3 Compute sales tax
4 Complete sales slip
5 Inform customer of warranty and guarantee specifications
6 Close sale
7 Conduct sale
8 Complete business forms
9 Communicate orally with clients

DUTY C: Performing Sales-Related Duties

TASKS:
1 Open store or department
2 Process debit card sales transaction
3 Process charge card sales transaction
4 Package customer purchase
5 Arrange delivery of merchandise
6 Process customer complaints
7 Close out cash register
8 Close store or department
9 Process customer related sales
10 Process cash sales transaction
11 Order supplies and stock
12 Process incoming order
13 Return unuseable merchandise
14 Code and date merchandise
15 Label and price merchandise
16 Update prices on merchandise
17 Stock merchandise displays
18 Store merchandise in storage area
19 Rotate supplies and stock
20 Greet and meet people

DUTY D: Performing Promotional Activities

TASKS:
1 Maintain customer file system
2 Plan territory management
3 Analyze and interpret market information
4 Prepare advertisements
5 Conduct sales promotional meetings
6 Identify potential buyers
7 Provide technical assistance to customers
8 Plan a sales promotional meeting

DUTY E: Financing the Agri-Business

TASKS:
1 Prepare cash flow projections
2 Prepare financial statements
3 Interpret financial statements
4 Prepare budget
5 Develop credit plan
6 Prepare tax statements
7 Calculate insurance needs
8 Prepare depreciation schedule
9 Prepare bank deposits
10 Prepare cash flow statement
11 Record accounts payable in computerized bookkeeping system
12 Record accounts receivable in computerized bookkeeping system

DUTY F: Performing General Office Work

TASKS:
1 Establish filing system
2 Establish file index
3 File materials such as receipts, letters, documents, specifications and orders
4 Write field report (prepare reports)
5 Type reports
6 Process incoming mail
7 Process outgoing mail
8 Maintain mailing lists
9 Schedule appointments and meetings
10 Process incoming telephone calls
11 Process outgoing telephone calls
12 Duplicate materials
13 Clean work area
14 Make minor office equipment repairs
15 Read livestock pest management calendar

DUTY G: Managing the Business

TASKS:
1 Conduct periodic inspection of merchandise
2 Conduct inventory of merchandise
3 Maintain inventory records
4 Plan work schedule
5 Maintain quality control records
6 Evaluate agri-business productivity
7 Supervise agriculture workers
8 Prepare payroll
9 Calculate payroll deductions
10 Maintain equipment records
11 Follow time management schedule
12 Follow work schedules
13 Utilize computerized inventory control system

DUTY H: Assembling, Servicing and Maintaining Equipment and Facilities

TASKS:
1 Service business vehicle
2 Service conveyor equipment
3 Clean and fumigate storage facility
4 Maintain hand tools
5 Service electrical outlets and extensions
6 Perform maintenance checks on equipment
7 Calibrate equipment

DUTY I: Maintaining and Constructing Structures

TASKS:
1 Perform maintenance inspection of facilities
2 Service livestock feeding equipment
3 Service livestock watering equipment

DUTY J: Harvesting and Storing Crops

TASKS:
1 Monitor moisture content of stored crops
2 Determine marketing strategy
3 Test grain for moisture content

DUTY K: Maintaining Animal Health

TASKS:
1 Identify ailments in animals
2 Deworm animals

DUTY L: Loading, Securing, Transporting, and Unloading Agricultural Products

TASKS:
1 Load grains such as corn, wheat and soybeans
2 Unload grains

DUTY M: Applying Safety Practices

TASKS:
1 Apply basic emergency first aid techniques
2 Use fire extinguisher
3 Demonstrate cardiopulmonary resuscitation (CPR) techniques
4 Comply with safety requirements for working around automated systems
5 Participate in safety training program

Employability skills are a vital component of vocational education programs and should be incorporated into each occupational task list.

SALESPERSON, FARM EQUIPMENT AND SUPPLIES

DUTY A: Performing Sales Duties

TASKS:
1 Determine customer needs
2 Locate merchandise
3 Compute sales tax
4 Complete sales slip
5 Inform customer of warranty and guarantee specifications
6 Close sale
7 Conduct sale
8 Complete business forms
9 Communicate orally with clients

DUTY B: Performing Sales-Related Duties

TASKS:
1 Open store or department
2 Process debit card sales transaction
3 Process charge card sales transaction
4 Package customer purchase
5 Arrange delivery of merchandise
6 Process customer complaints
7 Close out cash register
8 Close store or department
9 Process customer related sales
10 Process cash sales transaction
11 Order supplies and stock
12 Process incoming order
13 Return unuseable merchandise
14 Code and date merchandise
15 Label and price merchandise
16 Update prices on merchandise
17 Stock merchandise displays
18 Store merchandise in storage area
19 Rotate supplies and stock
20 Greet and meet people

DUTY C: Performing Promotional Activities

TASKS:
1 Maintain customer file system
2 Plan territory management
3 Analyze and interpret market information
4 Prepare advertisements
5 Conduct sales promotional meetings
6 Identify potential buyers
7 Provide technical assistance to customers
8 Plan a sales promotional meeting

DUTY D: Financing the Agri-Business

TASKS:
1 Prepare cash flow projections
2 Prepare financial statements
3 Interpret financial statements
4 Prepare budget

5 Develop credit plan
6 Prepare tax statements
7 Calculate insurance needs
8 Prepare depreciation schedule
9 Prepare bank deposits
10 Prepare cash flow statement
11 Record accounts payable in computerized bookkeeping system
12 Record accounts receivable in computerized bookkeeping system

DUTY E: Performing General Office Work

TASKS:
1 Establish filing system
2 Establish file index
3 File materials such as receipts, letters, documents, specifications and orders
4 Write field report (prepare reports)
5 Type reports
6 Process incoming mail
7 Process outgoing mail
8 Maintain mailing lists
9 Schedule appointments and meetings
10 Process incoming telephone calls
11 Process outgoing telephone calls
12 Duplicate materials
13 Clean work area
14 Make minor office equipment repairs
15 Read crop pest management calendar

DUTY F: Managing the Business

TASKS:
1 Conduct periodic inspection of merchandise
2 Conduct inventory of merchandise
3 Maintain inventory records
4 Plan work schedule
5 Maintain quality control records
6 Evaluate agri-business productivity
7 Supervise agriculture workers
8 Prepare payroll
9 Calculate payroll deductions
10 Maintain equipment records
11 Follow time management schedule
12 Follow work schedules
13 Utilize computerized inventory control system

DUTY G: Assembling, Servicing and Maintaining Equipment and Facilities

TASKS:
1 Service business vehicle
2 Clean and fumigate storage facility
3 Maintain hand tools
4 Service electrical outlets and extensions
5 Assemble planting equipment

6 Assemble tillage equipment
7 Perform maintenance checks on equipment
8 Calibrate equipment
9 Maintain service records
10 Assemble applicating pumps
11 Assemble boom type chemical equipment
12 Change cartridge air filters
13 Change nozzles on applicators
14 Check working condition of respirator
15 Clean granular application equipment
16 Clean liquid application equipment
17 Install spreader fan on shaft
18 Prepare equipment for off season storage

DUTY H: Applying Fertilizers and Chemicals

TASKS:
1 Evaluate chemicals applied to test plots
2 Calculate proportions of chemical and carrying agents
3 Calibrate spraying equipment
4 Prepare fertilizer program
5 Map chemical applications
6 Formulate fertilizer
7 Test soil
8 Compute fertilizer costs
9 Make fertilizer and lime recommendations
10 Compute chemical costs
11 Identify fertilizer injury
12 Time fertilizer and chemical applications
13 Maintain chemical files

DUTY I: Maintaining and Constructing Structures

TASKS:
1 Plan building construction
2 Perform maintenance inspection of facilities

DUTY J: Growing Corn, Soybeans, Small Grains, or Forage Crop

TASKS:
1 Select seed varieties
2 Prepare seed bed
3 Select planting method
4 Select pest control program

DUTY K: Scouting Fields for Weed, Disease, Insect or Other Damage

TASKS:
1 Identify weeds
2 Identify plant diseases
3 Identify crop insects and pests
4 Identify visually herbicide injury of plants
5 Identify visually injury of plants due to herbicide residues in the soil
6 Identify various crops
7 Identify planting problems

8 Evaluate soil conditions
9 Make recommendations for fungus control
10 Make recommendations for insect control
11 Make recommendations for weed control
12 Make recommendations for disease control

DUTY L: Loading, Securing, Transporting, and Unloading Agricultural Products

TASKS. 1 Load farm machinery
2 Unload farm machinery

DUTY M: Applying Safety Practices

TASKS: 1 Apply basic emergency first aid techniques
2 Use fire extinguisher
3 Demonstrate cardiopulmonary resuscitation (CPR) techniques
4 Comply with safety requirements for working around automated systems
5 Participate in safety training program

Employability skills are a vital component of vocational education programs and should be incorporated into each occupational task list.

FERTILIZER/CHEMICAL SERVICE WORKER

DUTY A: Performing Sales Duties

TASKS:
1 Locate merchandise
2 Complete business forms
3 Communicate orally with clients

DUTY B: Performing Sales-Related Duties

TASKS:
1 Code and date merchandise
2 Label and price merchandise
3 Store merchandise in storage area
4 Rotate supplies and stock
5 Greet and meet people

DUTY C: Performing Promotional Activities

TASKS:
1 Maintain customer file system
2 Conduct sales promotional meetings
3 Provide technical assistance to customers
4 Plan a sales promotional meeting

DUTY D: Performing General Office Work

TASKS:
1 File materials such as receipts, letters, documents, specifications and orders
2 Write field report (prepare reports)
3 Type reports
4 Process incoming telephone calls
5 Process outgoing telephone calls
6 Clean work area
7 Make minor office equipment repairs
8 Read crop pest management calendar
9 Collect pest samples for laboratory analysis

DUTY E: Managing the Business

TASKS:
1 Conduct periodic inspection of merchandise
2 Conduct inventory of merchandise
3 Maintain inventory records
4 Plan work schedule
5 Maintain quality control records
6 Maintain equipment records
7 Follow time management schedule
8 Follow work schedules
9 Utilize computerized inventory control system

DUTY F: Assembling, Servicing and Maintaining Equipment and Facilities

TASKS:
1 Service business vehicle
2 Service conveyor equipment
3 Clean and fumigate storage facility

4 Maintain hand tools
5 Service electrical outlets and extensions
6 Perform maintenance checks on equipment
7 Calibrate equipment
8 Maintain service records
9 Assemble applicating pumps
10 Assemble boom type chemical equipment
11 Change cartridge air filters
12 Change nozzles on applicators
13 Check working condition of respirator
14 Clean granular application equipment
15 Clean liquid application equipment
16 Lubricate equipment
17 Install spreader fan on shaft
18 Install drive wheel on applicating equipment
19 Paint equipment
20 Replace bearings
21 Replace belts
22 Replace booms
23 Replace drag chains
24 Replace impeller pump
25 Replace worn chain links
26 Replace universal joints
27 Repair electrical defects
28 Troubleshoot equipment failure
29 Prepare equipment for off season storage
30 Service fuel systems
31 Service electrical systems
32 Service lubrication systems
33 Service cooling systems
34 Test engine compression
35 Repair equipment utilizing shielded metal arc welding
36 Repair equipment utilizing oxy-fuel (OAW) equipment
37 Cut and pierce metal utilizing OAW equipment
38 Cut and pierce metal utilizing SMAW equipment

DUTY G: Applying Fertilizers and Chemicals

TASKS:
1 Evaluate chemicals applied to test plots
2 Dispose of chemicals and containers according to manufacturers specifications
3 Prepare chemical program
4 Calculate application rates
5 Calculate proportions of chemical and carrying agents
6 Calibrate spraying equipment
7 Prepare fertilizer program
8 Map chemical applications
9 Formulate fertilizer
10 Test soil
11 Compute fertilizer costs
12 Make fertilizer and lime recommendations
13 Compute chemical costs
14 Identify fertilizer injury
15 Time fertilizer and chemical applications
16 Maintain chemical files

DUTY H: Maintaining and Constructing Structures

TASKS:
1 Construct concrete floors and foundations
2 Perform maintenance inspection of facilities
3 Repair roofing and gutters
4 Repair siding
5 Repair doors and entry ways
6 Paint exterior surfaces of buildings
7 Paint interior surfaces of buildings
8 Repair and glaze windows and/or greenhouse lights
9 Service electrical systems of buildings
10 Maintain ventilation systems of buildings
11 Maintain water system

DUTY I: Growing Corn, Soybeans, Small Grains, or Forage Crop

TASKS:
1 Plan planting schedules
2 Select planting date
3 Select pest control program
4 Spray crop for pest control

DUTY J: Scouting Fields for Weed, Disease, Insect or Other Damage

TASKS:
1 Scout fields for weeds
2 Map fields for weed location and severity of weed pressure
3 Collect and prepare weed plant samples for laboratory identification
4 Identify weeds
5 Scout fields for plant disease damage
6 Collect plant disease specimens
7 Identify plant diseases
8 Scout fields for insect and pest damage
9 Map fields for insect and pest damage location and severity of problem
10 Identify crop insects and pests
11 Collect insect specimens for identification
12 Estimate crop loss due to hail or insect damage
13 Take and prepare soil samples for nematode identification
14 Complete plant specimen data form
15 Identify visually herbicide injury of plants
16 Collect samples of herbicide injured plants
17 Identify visually injury of plants due to herbicide residues in the soil
18 Keep records of scouting visits by completing scouting forms
19 Collect plant tissue for nutrient analysis
20 Identify various crops
21 Determine crop rotations
22 Estimate crop yields
23 Identify planting problems
24 Evaluate soil conditions
25 Make recommendations for fungus control

26 Make recommendations for insect control
27 Make recommendations for weed control
28 Make recommendations for disease control

DUTY K: Loading, Securing, Transporting, and Unloading Agricultural P

TASKS:
1 Prepare truck
2 Load products such as fertilizer and chemicals
3 Load farm machinery
4 Unload farm machinery

DUTY L: Applying Safety Practices

TASKS:
1 Comply with shop and equipment safety rules
2 Apply basic emergency first aid techniques
3 Complete accident report
4 Inspect work area and equipment for safe working environment
5 Use fire extinguisher
6 Correct safety hazards
7 Demonstrate cardiopulmonary resuscitation (CPR) techniques
8 Comply with safety requirements for working around automated systems
9 Participate in safety training program

Employability skills are a vital component of vocational education programs and should be incorporated into each occupational task list.

DUTY A: Formulating Livestock Feeding Programs

TASKS:
1 Evaluate livestock production records
2 Assess livestock needs such as growing and fattening, nursing, production or special nutritional needs
3 Identify feed formula for livestock needs
4 Balance rations
5 Substitute feed ingredients
6 Mix feed additives and medications
7 Analyze feed nutritional value
8 Compute feed cost per pound gain
9 Evaluate feeding program
10 Plan feeding program
11 Record daily feed consumption

DUTY B: Performing Sales Duties

TASKS:
1 Determine customer needs
2 Complete business forms

DUTY C: Performing Sales-Related Duties

TASKS:
1 Order supplies and stock
2 Store merchandise in storage area
3 Rotate supplies and stock

DUTY D: Marketing Animals and Animal Products

TASKS:
1 Plan marketing schedule
2 Select markets
3 Sort and mark animals for market

DUTY E: Financing the Agri-Business

TASKS:
1 Calculate net worth of machinery
2 Calculate net worth of animals
3 Calculate net worth of land
4 Calculate operating expenses
5 Prepare cash flow projections
6 Prepare financial statements
7 Interpret financial statements
8 Prepare budget
9 Develop credit plan
10 Complete the business loan application process
11 Prepare tax statements
12 Calculate insurance needs
13 Prepare depreciation schedule
14 Prepare bank deposits
15 Prepare cash flow statement

16 Record accounts payable in computerized bookkeeping system
17 Record accounts receivable in computerized bookkeeping system

DUTY F: Performing General Office Work

TASKS:
1 Establish filing system
2 Establish file index
3 File materials such as receipts, letters, documents, specifications and orders
4 Write field report (prepare reports)
5 Type reports
6 Process incoming mail
7 Process outgoing mail
8 Schedule appointments and meetings
9 Process incoming telephone calls
10 Process outgoing telephone calls
11 Clean work area
12 Make minor office equipment repairs
13 Read crop pest management calendar
14 Collect pest samples for laboratory analysis
15 Read livestock pest management calendar

DUTY G: Managing the Business

TASKS:
1 Conduct periodic inspection of merchandise
2 Conduct inventory of merchandise
3 Maintain inventory records
4 Plan work schedule
5 Determine labor needs
6 Evaluate employee performance
7 Maintain quality control records
8 Evaluate agri-business productivity
9 Supervise agriculture workers
10 Prepare payroll
11 Calculate payroll deductions
12 Maintain production records
13 Maintain animal records
14 Maintain equipment records
15 Develop land use program
16 Follow time management schedule
17 Follow work schedules
18 Purchase machinery and equipment
19 Select computer software for records and reports
20 Select computer software for livestock management decisions
21 Select computer software for crop management decisions
22 Select computer software for machinery management decisions
23 Utilize a computerized network on agricultural marketing and management
24 Utilize computerized inventory control system

DUTY H: Assembling, Servicing and Maintaining Equipment and Facilities

TASKS:
1 Service business vehicle
2 Service conveyor equipment
3 Clean and fumigate storage facility
4 Maintain hand tools
5 Service electrical outlets and extensions
6 Assemble planting equipment
7 Assemble tillage equipment
8 Perform maintenance checks on equipment
9 Calibrate equipment
10 Maintain service records
11 Assemble applicating pumps
12 Assemble boom type chemical equipment
13 Change cartridge air filters
14 Change nozzles on applicators
15 Check working condition of respirator
16 Clean granular application equipment
17 Clean liquid application equipment
18 Lubricate equipment
19 Install spreader fan on shaft
20 Install drive wheel on applicating equipment
21 Paint equipment
22 Replace bearings
23 Replace belts
24 Replace booms
25 Replace drag chains
26 Replace impeller pump
27 Replace worn chain links
28 Replace universal joints
29 Repair electrical defects
30 Troubleshoot equipment failure
31 Prepare equipment for off season storage
32 Service fuel systems
33 Service electrical systems
34 Service lubrication systems
35 Service cooling systems
36 Test engine compression
37 Repair equipment utilizing shielded metal arc welding
38 Repair equipment utilizing oxy-fuel (OAW) equipment
39 Cut and pierce metal utilizing OAW equipment
40 Cut and pierce metal utilizing SMAW equipment

DUTY I: Applying Fertilizers and Chemicals

TASKS:
1 Evaluate chemicals applied to test plots
2 Dispose of chemicals and containers according to manufacturers specifications
3 Prepare chemical program
4 Calculate application rates
5 Calculate proportions of chemical and carrying agents
6 Calibrate spraying equipment
7 Prepare fertilizer program
8 Map chemical applications
9 Formulate fertilizer

10 Test soil
11 Compute fertilizer costs
12 Make fertilizer and lime recommendations
13 Compute chemical costs
14 Identify fertilizer injury
15 Time fertilizer and chemical applications
16 Maintain chemical files

DUTY J: Maintaining and Constructing Structures

TASKS:
1 Plan building construction
2 Construct concrete floors and foundations
3 Construct wooden fence
4 Construct wire fence
5 Construct gates
6 Install gates
7 Perform maintenance inspection of facilities
8 Repair roofing and gutters
9 Repair siding
10 Repair doors and entry ways
11 Paint exterior surfaces of buildings
12 Paint interior surfaces of buildings
13 Repair and glaze windows and/or greenhouse lights
14 Service electrical systems of buildings
15 Maintain ventilation systems of buildings
16 Maintain water system
17 Service livestock feeding equipment
18 Service livestock watering equipment
19 Lay out building using transit
20 Layout conservation structures using transit

DUTY K: Growing Corn, Soybeans, Small Grains, or Forage Crop

TASKS:
1 Plan planting schedules
2 Select seed varieties
3 Select planting date
4 Prepare seed bed
5 Select planting method
6 Plant seeds
7 Select pest control program
8 Monitor plant growth
9 Spray crop for pest control
10 Cultivate crop
11 Determine number of forage crop cuttings

DUTY L: Harvesting and Storing Crops

TASKS:
1 Harvest beans, corn, and small grains
2 Dry and store beans, corn, and small grains
3 Harvest forage crops
4 Store forage crops
5 Monitor moisture content of stored crops
6 Determine marketing strategy

7 Transport crops to market
8 Test grain for moisture content

DUTY M: Breeding, Handling and Caring for Animals

TASKS:
1 Inseminate animals artifically
2 Pregnancy test animals
3 Assist animals in delivery
4 Assist young to nurse
5 Castrate animals
6 Dehorn animals
7 Control building temperature
8 Control building ventilation
9 Control building lighting
10 Restrain animals
11 Evaluate animals for registry
12 Mark or tag animals for identification

DUTY N: Maintaining Animal Health

TASKS:
1 Inspect animals for disease
2 Identify ailments in animals
3 Administer medication
4 Control parasites (external or internal)
5 Treat wounds
6 Disinfect buildings and equipment
7 Deworm animals

DUTY O: Scouting Fields for Weed, Disease, Insect or Other Damage

TASKS:
1 Scout fields for weeds
2 Map fields for weed location and severity of weed pressure
3 Collect and prepare weed plant samples for laboratory identification
4 Identify weeds
5 Scout fields for plant disease damage
6 Collect plant disease specimens
7 Identify plant diseases
8 Scout fields for insect and pest damage
9 Map fields for insect and pest damage location and severity of problem
10 Identify crop insects and pests
11 Collect insect specimens for identification
12 Estimate crop loss due to hail or insect damage
13 Take and prepare soil samples for nematode identification
14 Complete plant specimen data form
15 Estimate and monitor insect populations
16 Identify visually herbicide injury of plants
17 Collect samples of herbicide injured plants
18 Identify visually injury of plants due to herbicide residues in the soil

19 Keep records of scouting visits by completing scouting forms
20 Collect plant tissue for nutrient analysis
21 Identify various crops
22 Determine crop rotations
23 Estimate crop yields
24 Identify planting problems
25 Evaluate soil conditions
26 Make recommendations for fungus control
27 Make recommendations for insect control
28 Make recommendations for weed control
29 Make recommendations for disease control

DUTY P: Loading, Securing, Transporting, and Unloading Agricultural Products

TASKS:
1 Prepare truck
2 Load livestock
3 Restrain livestock
4 Transport livestock
5 Monitor condition of livestock in transit
6 Unload livestock
7 Load grains such as corn, wheat and soybeans
8 Unload grains
9 Load baled crops such as alfalfa and straw
10 Unload baled crops
11 Load products such as fertilizer and chemicals
12 Load farm machinery
13 Unload farm machinery

DUTY Q: Applying Safety Practices

TASKS:
1 Comply with shop and equipment safety rules
2 Apply basic emergency first aid techniques
3 Complete accident report
4 Inspect work area and equipment for safe working environment
5 Use fire extinguisher
6 Correct safety hazards
7 Demonstrate cardiopulmonary resuscitation (CPR) techniques
8 Comply with safety requirements for working around automated systems
9 Participate in safety training program

Employability skills are a vital component of vocational education programs and should be incorporated into each occupational task list.

DUTY A: Performing Sales Duties

TASKS:
1 Locate merchandise
2 Compute sales tax
3 Complete sales slip
4 Inform customer of warranty and guarantee specifications
5 Complete business forms
6 Communicate orally with clients

DUTY B: Performing Sales-Related Duties

TASKS:
1 Order supplies and stock
2 Store merchandise in storage area
3 Greet and meet people

DUTY C: Performing Promotional Activities

TASKS:
1 Maintain customer file system
2 Plan territory management
3 Analyze and interpret market information
4 Provide technical assistance to customers

DUTY D: Performing General Office Work

TASKS:
1 File materials such as receipts, letters, documents, specifications and orders
2 Write field report (prepare reports)
3 Type reports
4 Process incoming mail
5 Process outgoing mail
6 Maintain mailing lists
7 Schedule appointments and meetings
8 Process incoming telephone calls
9 Process outgoing telephone calls
10 Clean work area
11 Make minor office equipment repairs
12 Read crop pest management calendar
13 Collect pest samples for laboratory analysis

DUTY E: Managing the Business

TASKS:
1 Conduct periodic inspection of merchandise
2 Conduct inventory of merchandise
3 Maintain inventory records
4 Plan work schedule
5 Maintain quality control records
6 Maintain equipment records
7 Follow time management schedule
8 Follow work schedules
9 Utilize computerized inventory control system

DUTY F: Assembling, Servicing and Maintaining Equipment and Facilities

TASKS:
1 Service business vehicle
2 Maintain hand tools
3 Service electrical outlets and extensions
4 Perform maintenance checks on equipment
5 Calibrate equipment
6 Maintain service records
7 Change nozzles on applicators
8 Check working condition of respirator
9 Clean granular application equipment
10 Clean liquid application equipment
11 Service fuel systems
12 Service electrical systems
13 Service lubrication systems
14 Service cooling systems

DUTY G: Applying Fertilizers and Chemicals

TASKS:
1 Evaluate chemicals applied to test plots
2 Dispose of chemicals and containers according to manufacturers specifications
3 Prepare chemical program
4 Calculate application rates
5 Calculate proportions of chemical and carrying agents
6 Calibrate spraying equipment
7 Prepare fertilizer program
8 Map chemical applications
9 Compute chemical costs
10 Identify fertilizer injury
11 Time fertilizer and chemical applications
12 Maintain chemical files

DUTY H: Growing Corn, Soybeans, Small Grains, or Forage Crop

TASKS:
1 Select pest control program
2 Monitor plant growth
3 Spray crop for pest control

DUTY I: Scouting Fields for Weed, Disease, Insect or Other Damage

TASKS:
1 Scout fields for weeds
2 Map fields for weed location and severity of weed pressure
3 Collect and prepare weed plant samples for laboratory identification
4 Identify weeds
5 Scout fields for plant disease damage
6 Collect plant disease specimens
7 Identify plant diseases
8 Scout fields for insect and pest damage
9 Map fields for insect and pest damage location and severity of problem

10 Identify crop insects and pests
11 Collect insect specimens for identification
12 Estimate crop loss due to hail or insect damage
13 Take and prepare soil samples for nematode identification
14 Complete plant specimen data form
15 Set out insect traps
16 Monitor insect traps
17 Estimate and monitor insect populations
18 Identify visually herbicide injury of plants
19 Collect samples of herbicide injured plants
20 Identify visually injury of plants due to herbicide residues in the soil
21 Keep records of scouting visits by completing scouting forms
22 Collect plant tissue for nutrient analysis
23 Identify various crops
24 Determine crop rotations
25 Estimate crop yields
26 Identify planting problems
27 Evaluate soil conditions
28 Make recommendations for fungus control
29 Make recommendations for insect control
30 Make recommendations for weed control
31 Make recommendations for disease control

DUTY J: Applying Safety Practices

TASKS:
1 Apply basic emergency first aid techniques
2 Use fire extinguisher
3 Demonstrate cardiopulmonary resuscitation (CPR) techniques
4 Participate in safety training program

Employability skills are a vital component of vocational education programs and should be incorporated into each occupational task list.

Education For Employment Task Lists

Illinois State Board of Education

Adult Vocational and Technical Education

AGRICULTURAL OCCUPATIONS

HORTICULTURE CLUSTER

Landscape Laborer

Landscape Gardener/Landscaper

Horticultural Worker

Salesperson, Horticulture and Nursery Products

*Employability Skills

*Employability skills are a vital component of vocational education programs and should be incorporated into each occupational task list.

NOTE:

The duties and tasks found in these task lists form the basis of instructional content for secondary, postsecondary and adult occupational training programs. Orientation level instruction, usually offered in grades 9, 10, and 11, is a vital component of all vocational education programs and provides a strong foundation and vehicle for transitioning into occupational training programs.

These materials were prepared under contract with the Illinois State Board of Education, Department of Adult, Vocational and Technical Education ("Illinois Competency Based Vocational Education Project," contract number 27-R1-130).

HORTICULTURE CLUSTER MATRIX

LL = Landscape Laborer
LG = Landscape Gardener/Landscaper
HW = Horticultural Worker
SP = Salesperson, Horticulture and Nursery Products

PROPAGATING PLANTS, SEEDS AND CUTTINGS

	LL	LG	HW	SP
1 Plan planting schedules		X	X	
2 Clean seed	X	X	X	
3 Plant seed in flats or growing benches	X	X	X	
4 Plant seed using plate type planter			X	
5 Plant seed using air type planter			X	
6 Plant seed using a precision small seed type planter			X	
7 Plant bulbs	X	X	X	
8 Transplant seedlings using a hand transplanter	X	X	X	
9 Transplant seedling fruit trees using a hole digger			X	
10 Transplant seedlings using a wheel type transplanter			X	
11 Transplant using a hand transplanter			X	
12 Monitor plant growth	X	X	X	
13 Thin nursery stock	X	X	X	
14 Lay sod	X	X	X	
15 Maintain sod	X	X	X	
16 Prepare plants and cuttings for propagation	X	X	X	
17 Take cuttings	X	X	X	
18 Stick cuttings	X	X	X	
19 Label planted specimens	X	X	X	
20 Plant trees and shrubs	X	X	X	
21 Prepare seed for resting period	X	X	X	
22 Provide winterization of plants	X	X	X	
23 Select seed varieties		X	X	
24 Transplant cuttings			X	

PREPARING SOILS AND PLANTING MEDIA

	LL	LG	HW	SP
1 Shred planting media			X	
2 Screen planting media			X	
3 Mix media materials			X	
4 Pasteurize prepared media with steam			X	
5 Pasteurize media with chemicals			X	
6 Sterilize (pasteurize) soil in field			X	
7 Mix fertilizer into media	X	X	X	
8 Construct open drainage ditch	X	X	X	
9 Prepare seedbed	X	X	X	
10 Level or smooth planting area	X	X	X	
11 Mark off location of beds	X	X	X	
12 Shape or form beds	X	X	X	
13 Mark off planting spaces with bedwire	X	X	X	

CONTROLLING PLANT ENVIRONMENT

	LL	LG	HW	SP
1 Control growth rate by applying retardant	X	X	X	X
2 Control light requirements by using shade cloth	X	X	X	X
3 Control temperature by setting thermostat			X	X
4 Cultivate plants	X	X	X	X
5 Water plants and nursery stock	X	X	X	X

	LL	LG	HW	SP
6 Apply mulches	X	X	X	X
7 Control pests	X	X	X	X
8 Treat diseased plants, bulbs and corms	X	X	X	X
9 Remove diseased plants	X	X	X	X
10 Plan conservation practices		X		X
11 Set time clock for automatic mist propagation system			X	
12 Aerate compacted soil	X	X	X	
13 Pinch and disbud flowering plants			X	
14 Force bulbs			X	X
15 Report disease and spray damage	X	X	X	X

CULTIVATING AND IRRIGATING VEGETABLE AND FRUIT CROPS

	LL	LG	HW	SP
1 Cultivate crops using chisel type plow			X	
2 Cultivate crops using disk harrow			X	
3 Cultivate crops using spike harrow			X	
4 Cultivate crops using sweep type plow			X	
5 Set up overhead irrigation system			X	
6 Cultivate using rolling cultivator			X	
7 Cultivate using power hoe			X	

APPLYING FERTILIZER AND CHEMICALS

	LL	LG	HW	SP
1 Calculate fertilizer and chemical applications	X	X	X	X
2 Formulate fertilizer	X	X	X	X
3 Calibrate fertilizer application equipment	X	X	X	X
4 Collect soil sample for fertility test	X	X	X	X
5 Test soil		X	X	X
6 Make fertilizer and lime recommendations		X	X	X
7 Assess crop nutrient deficiencies	X	X	X	X
8 Treat nutrient deficiencies	X	X	X	X
9 Identify chemical injury of plants	X	X	X	X
10 Calibrate chemical equipment	X	X	X	X
11 Mix chemicals	X	X	X	X
12 Time chemical applications	X	X	X	X
13 Store chemicals	X	X	X	X
14 Perform safety checks on equipment	X	X	X	X
15 Transport chemicals	X	X	X	X
16 Map chemical applications	X	X	X	X
17 Compute fertilizer costs		X		X
18 Apply fertilizer using watering system	X	X	X	X
19 Apply fertilizer using an auger type distributor			X	
20 Apply fertilizer using cyclone type spreader			X	
21 Apply fertilizer using drill type distributor			X	
22 Apply fertilizer using liquid applicator			X	
23 Apply chemicals using boom type sprayer			X	
24 Apply chemicals using fumigant injector			X	
25 Apply chemicals using air blast sprayer			X	
26 Select chemicals for specific problems		X		X
27 Compute chemical costs		X		X
28 Maintain chemical inventory file		X		X
29 Determine insurance coverage needs		X		
30 Administer first aid	X	X	X	X
31 Dispose of chemicals and containers according to manufacturer's specifications				X

HARVESTING PLANTS

	LL	LG	HW	SP
1 Dig shrubs and trees	X	X	X	
2 Ball and burlap shrubs and trees	X	X	X	
3 Grade plants		X		X
4 Label harvested plants by common names	X	X	X	X
5 Harvest seeds	X		X	
6 Harvest bareroot stock			X	
7 Dig bulbs and corms			X	
8 Clean and size harvested bulbs and corms			X	
9 Dry harvested bulbs and corms			X	
10 Cut flowers and ferns			X	
11 Count, grade and bunch flowers and ferns			X	X
12 Prepare and place cut flowers in water or preservative			X	
13 Remove saleable plants from beds			X	
14 Remove bed wire from harvested areas			X	
15 Mark trees to be harvested			X	

HARVESTING VEGETABLE CROPS

	LL	LG	HW	SP
1 Pick small fruits			X	
2 Pick tree fruits			X	
3 Pick bush fruits			X	
4 Pick bush vegetables			X	
5 Pick vine vegetables			X	
6 Deliver baskets or boxes to grader or market			X	
7 Load pallets on truck or trailer			X	

GRADING AND PACKAGING FRUIT AND VEGETABLE CROPS

	LL	LG	HW	SP
1 Adjust a grader			X	
2 Wash and grade crops			X	
3 Cool crops using a cooler room			X	
4 Set up grader			X	

MAINTAINING AND PROTECTING FRUIT TREES

	LL	LG	HW	SP
1 Maintain a mechanical topper			X	
2 Prune trees for frame			X	
3 Perform annual pruning for shape and fruit set			X	
4 Top fruit trees using a mechanical topper			X	

STORING, SHIPPING AND TAKING INVENTORY

	LL	LG	HW	SP
1 Bundle plants	X	X	X	X
2 Wrap plants	X	X	X	X
3 Pack plants	X	X	X	X
4 Bunch plants	X	X	X	X
5 Pack shrubs	X	X	X	X
6 Care for overwintering of container grown plants	X	X	X	
7 Check received merchandise against invoice listing	X	X	X	X
8 Keep current inventory of products for sale	X	X	X	X
9 Load truck and trailer for drop shipment	X	X	X	
10 Transport products	X	X	X	
11 Package orders for shipment	X	X	X	X
12 Store received supplies	X	X	X	

	LL	LG	HW	SP
13 Write sales receipt	X			X
14 Assemble shipping cartons			X	
15 Load and unload bagged and bulk materials	X		X	
16 Store floral and foliage plants in cold storage units			X	

DESIGNING/INSTALLING LANDSCAPES

	LL	LG	HW	SP
1 Obtain plants	X	X		
2 Follow landscape plan in installing plants	X	X	X	
3 Plant trees	X	X	X	
4 Plant shrubs	X	X	X	
5 Plant ground covers	X	X	X	
6 Seed lawns	X	X		
7 Select plants		X		X
8 Design corner planting/paper and pencil		X		X
9 Design corner planting/landscape software		X		X
10 Design line planting/paper and pencil		X		X
11 Design line planting/landscape software		X		X
12 Design foundation planting/paper and pencil		X		X
13 Design foundation planting/landscape software		X		X
14 Design landscape plan/paper and pencil		X		X
15 Design landscape plan/landscape software		X		X
16 Construct landscape model		X		X
17 Price landscape design		X		X
18 Read landscape plan	X	X		X
19 Set landscaping stones	X	X	X	

MAINTAINING AND IMPROVING GROUNDS

	LL	LG	HW	SP
1 Aerify turf			X	
2 Verticut turf			X	
3 Apply topdressing to turf			X	
4 Overseed turf			X	
5 Mow grounds			X	
6 Trim hedges			X	
7 Trim lawn edges			X	
8 Irrigate lawns			X	
9 Prune trees			X	
10 Prune plants, hedges, and shrubs			X	
11 Sod worn spots in lawn			X	
12 Clean ornamental pools			X	

SERVICING AND MAINTAINING EQUIPMENT AND FACILITIES

	LL	LG	HW	SP
1 Service tillage preparation equipment	X	X	X	
2 Service planting equipment	X	X	X	
3 Service cultivating equipment (clean, lubricate and adjust chain drive)	X	X	X	
4 Service harvesting equipment	X	X	X	
5 Service conveyance systems	X	X	X	
6 Service tires	X	X	X	
7 Service utility tractor	X	X	X	
8 Service business vehicle	X	X	X	X
9 Service small four cycle and two cycle engines	X	X	X	X
10 Maintain hand tools	X	X	X	X

	LL	LG	HW	SP
11 Service sprinkler system by replacing valves and gaskets	X	X	X	X
12 Clean dusters	X	X	X	
13 Replace greenhouse fan	X	X	X	
14 Clean sprayers	X	X	X	
15 Install sprinkler heads, nozzles and other irrigation equipment	X	X	X	
16 Clean work and delivery areas	X	X	X	X
17 Service electrical outlets and extensions	X			X
18 Lubricate and adjust power equipment	X	X	X	
19 Service ventilation system	X	X	X	
20 Troubleshoot electrical wiring and equipment	X	X	X	
21 Troubleshoot equipment failure	X	X	X	
22 Calibrate equipment	X	X	X	X
23 Maintain service records	X	X	X	X
24 Order equipment parts		X	X	X
25 Service electrical controls			X	
26 Perform routine maintenance and repairs			X	X
27 Service electric motors			X	
28 Prepare equipment for off-season storage	X	X	X	
29 Establish service records				X
30 Clean and fumigate storage facility	X		X	X

PERFORMING GENERAL OFFICE WORK

	LL	LG	HW	SP
1 Process incoming telephone calls	X	X	X	X
2 Process outgoing telephone calls	X	X	X	X
3 Clean work area	X	X	X	X
4 File materials		X		
5 Type reports		X		X
6 Process incoming mail		X		X
7 Process outgoing mail		X		X
8 Maintain mailing list		X		X
9 Schedule appointments and meetings		X		X
10 Repair minor malfunctions of office equipment		X		X
11 Duplicate materials		X		X
12 Establish filing system		X		X
13 Establish file index		X		X
14 Prepare bank deposits		X		X
15 Reconcile bank statements		X		
16 Write field reports		X		X
17 Order supplies and equipment		X	X	
18 Establish a payroll system		X		
19 Prepare payroll		X		

PERFORMING SALES DUTIES

	LL	LG	HW	SP
1 Conduct sale		X		X
2 Close sale		X		X
3 Plan territory management		X		X
4 Complete business forms		X		X
5 Determine customer needs		X		X
6 Conduct sales meetings		X		X
7 Identify potential buyers		X		X
8 Provide customers with technical assistance		X		X

	LL	LG	HW	SP
9 Recommend plant maintenance procedures		X		X
10 Prepare sales options		X		X
11 Secure consumer approval for the sales option		X		X
12 Implement approved sales option		X		X
13 Evaluate sales process		X		X
14 Plan marketing strategy		X		X
15 Develop promotional aids		X		X
16 Prepare plants for sale		X	X	X
17 Prepare floral arrangements			X	X
18 Process telephone orders		X	X	X
19 Prepare invoices		X	X	
20 Assist customer in locating merchandise		X	X	X
21 Inform customer of warrantee and guarantee specifications		X		X
22 Compute sales tax		X		X
23 Complete sales slip		X		X

PERFORMING SALES-RELATED DUTIES

	LL	LG	HW	SP
1 Open store or department				X
2 Process cash sales transaction				X
3 Process debit card sales transaction				X
4 Process charge card sales transaction				X
5 Package customer purchase				X
6 Process customer complaint				X
7 Close out cash register				X
8 Close store or department				X
9 Process customer returned sales				X
10 Greet and meet people		X		X
11 Maintain customer file system		X		X
12 Interpret market information		X		
13 Label and price products		X		X
14 Prepare advertisements		X		X
15 Code and date merchandise		X		
16 Rotate horticulture and nursery products		X		X

MAINTAINING AND CONSTRUCTING STRUCTURES

	LL	LG	HW	SP
1 Paint exterior surfaces of buildings	X	X	X	
2 Paint interior surfaces	X	X	X	
3 Repair and glaze windows and greenhouse lights	X	X	X	
4 Construct hot beds			X	
5 Construct cold frames			X	
6 Perform maintenance inspection of facilities	X	X	X	
7 Repair roofing and gutters	X	X	X	
8 Repair siding	X	X	X	
9 Repair doors and entry ways	X	X	X	
10 Maintain ventilation systems of buildings			X	
11 Replace plastic covering on greenhouse structures			X	
12 Repair wooden portions of greenhouse superstructure			X	
13 Replace damaged sections of structures and plastic coverings			X	

	LL	LG	HW	SP
14 Replace damaged support wires for black cloth and plastic coverings			X	
15 Repair wooden greenhouse benches			X	
16 Construct a packing shed			X	

MANAGING THE BUSINESS

	LL	LG	HW	SP
1 Maintain business records		X		X
2 Prepare financial statements		X		
3 Interpret financial statements		X		
4 Complete the business loan application process		X		
5 Develop credit plan		X		X
6 Prepare budget		X		
7 Prepare tax statements		X		
8 Prepare depreciation schedule		X		
9 Calculate net worth		X		
10 Develop land use program		X		
11 Supervise agriculture workers		X		
12 Orient new employees		X		
13 Plan work schedules		X		X
14 Determine labor needs		X		X
15 Train workers using demonstration-performance method		X		X
16 Evaluate employee performance		X		
17 Prepare reports		X		X
18 Develop business agreements		X		
19 Develop marketing plan		X		X
20 Maintain inventory records				X
21 Select computer software for records and reports	X			X
22 Select computer software for horticulture applications	X			X
23 Utilize a computerized network on agricultural marketing and management		X		X
24 Prepare periodic reports and financial statements using computer system		X		X
25 Input accounting entries in computerized bookkeeping system		X		X
26 Establish computerized inventory control system		X		
27 Analyze financial statements using financial ratios		X		
28 Select a bookkeeping/accounting system		X		

DUTY A: Identifying Employment Opportunities

SKILLS:
1 Identify requirements for job
2 Investigate educational opportunities
3 Investigate occupational opportunities
4 Locate resources for finding employment
5 Confer with prospective employers
6 Identify job trends

DUTY B: Applying Employment Seeking Skills

SKILLS:
1 Locate job openings
2 Document skills and abilities (resume)
3 Prepare for interview
4 Participate in interview
5 Complete required tests
6 Complete required forms
7 Write application letter
8 Write follow-up letter
9 Write acceptance letter
10 Evaluate job offer
11 Evaluate job rejection

DUTY C: Interpreting Employment Capabilities

SKILLS:
1 Match interest to job area
2 Match aptitudes to job area
3 Verify abilities
4 Identify immediate work goal
5 Develop career plan

DUTY D: Demonstrating Appropriate Work Behavior

SKILLS:
1 Exhibit dependability
2 Demonstrate punctuality
3 Follow rules and regulations
4 Recognize the consequences of dishonesty
5 Complete assignments in accurate and timely manner
6 Control emotions
7 Assume responsibility for own decisions and actions
8 Exhibit pride and loyalty
9 Exhibit ability to handle pressures and tensions
10 Demonstrate ability to set priorities
11 Demonstrate problem-solving skills

DUTY E: Maintaining Safe and Healthy Environment

SKILLS:
1 Comply with safety and health rules
2 Select correct tools and equipment
3 Utilize equipment correctly

4 Use appropriate action during emergencies
5 Maintain clean and orderly work area
6 Demonstrate personal hygiene and cleanliness

DUTY F: Maintaining Business-Like Image

SKILLS: 1 Participate in company or agency orientation
2 Demonstrate knowledge of company or agency products and services
3 Exhibit positive behavior
4 Read current job-related publications
5 Support and promote employer's company image and purpose
6 Maintain appearance to comply with company standards

DUTY G: Maintaining Working Relationships with Others

SKILLS: 1 Work productively with others
2 Show empathy, respect and support for others
3 Demonstrate procedures and assist others when necessary
4 Recognize, analyze and solve or refer problems
5 Minimize occurrence of problems
6 Channel emotional reaction constructively

DUTY H: Communicating on the Job

SKILLS: 1 Read and comprehend written communications and information
2 Use correct grammar
3 Speak effectively with others
4 Use job-related terminology
5 Listen attentively
6 Write legibly
7 Use telephone etiquette
8 Follow written and oral directions
9 Ask questions
10 Locate information in order to accomplish task
11 Prepare written communication
12 Utilize keyboarding skills
13 Utilize computer skills

DUTY I: Adapting to Change

SKILLS: 1 Recognize need to change
2 Demonstrate willingness to learn
3 Demonstrate flexibility
4 Participate in continuing education
5 Seek work challenges
6 Adjust career goals/plan as needed

DUTY J: Understanding How a Business Works

SKILLS:
1 Recognize the role of business in the enterprise system
2 Identify general responsibilities of employees
3 Identify general responsibilities of management/employers
4 Investigate opportunities and options for business ownership
5 Identify planning processes needed to open a business
6 Participate in meetings

DUTY K: Performing Mathematical Skills

SKILLS:
1 Apply mathematics for problem solving
2 Add and subtract whole numbers, decimals and fractions
3 Multiply and divide whole numbers, decimals and fractions
4 Convert numbers between forms expressed as fractions, decimals and percents
5 Convert between standard American units of measure
6 Convert between standard American units and metric units

Employability skills are a vital component of vocational education programs and should be incorporated into each occupational task list.

LANDSCAPE LABORER

DUTY A: Propagating Plants, Seeds and Cuttings

TASKS:
1 Clean seed
2 Plant seed in flats or growing benches
3 Plant bulbs
4 Transplant seedlings using a hand transplanter
5 Monitor plant growth
6 Thin nursery stock
7 Lay sod
8 Maintain sod
9 Prepare plants and cuttings for propagation
10 Take cuttings
11 Stick cuttings
12 Label planted specimens
13 Plant trees and shrubs
14 Prepare seed for resting period
15 Provide winterization of plants

DUTY B: Preparing Soils and Planting Media

TASKS:
1 Mix fertilizer into media
2 Construct open drainage ditch
3 Prepare seedbed
4 Level or smooth planting area
5 Mark off location of beds
6 Shape or form beds
7 Mark off planting spaces with bedwire

DUTY C: Controlling Plant Environment

TASKS:
1 Control growth rate by applying retardant
2 Control light requirements by using shade cloth
3 Cultivate plants
4 Water plants and nursery stock
5 Apply mulches
6 Control pests
7 Treat diseased plants, bulbs and corms
8 Remove diseased plants
9 Aerate compacted soil
10 Report disease and spray damage

DUTY D: Applying Fertilizer and Chemicals

TASKS:
1 Calculate fertilizer and chemical applications
2 Formulate fertilizer
3 Calibrate fertilizer application equipment
4 Collect soil sample for fertility test
5 Assess crop nutrient deficiencies
6 Treat nutrient deficiencies
7 Identify chemical injury of plants
8 Calibrate chemical equipment
9 Mix chemicals
10 Time chemical applications

11 Store chemicals
12 Perform safety checks on equipment
13 Transport chemicals
14 Map chemical applications
15 Apply fertilizer using watering system
16 Administer first aid

DUTY E: Harvesting Plants

TASKS: 1 Dig shrubs and trees
2 Ball and burlap shrubs and trees
3 Label harvested plants by common names
4 Harvest seeds

DUTY F: Storing, Shipping and Taking Inventory

TASKS: 1 Bundle plants
2 Wrap plants
3 Pack plants
4 Bunch plants
5 Pack shrubs
6 Care for overwintering of container grown plants
7 Check received merchandise against invoice listing
8 Keep current inventory of products for sale
9 Load truck and trailer for drop shipment
10 Transport products
11 Package orders for shipment
12 Store received supplies
13 Write sales receipt
14 Load and unload bagged and bulk materials

DUTY G: Designing/Installing Landscapes

TASKS: 1 Obtain plants
2 Follow landscape plan in installing plants
3 Plant trees
4 Plant shrubs
5 Plant ground covers
6 Seed lawns
7 Read landscape plan
8 Set landscaping stones

DUTY H: Servicing and Maintaining Equipment and Facilities

TASKS: 1 Service tillage preparation equipment
2 Service planting equipment
3 Service cultivating equipment (clean, lubricate and adjust chain drive)
4 Service harvesting equipment
5 Service conveyance systems
6 Service tires
7 Service utility tractor

8 Service business vehicle
9 Service small four cycle and two cycle engines
10 Maintain hand tools
11 Service sprinkler system by replacing valves and gaskets
12 Clean dusters
13 Replace greenhouse fan
14 Clean sprayers
15 Install sprinkler heads, nozzles and other irrigation equipment
16 Clean work and delivery areas
17 Service electrical outlets and extensions
18 Lubricate and adjust power equipment
19 Service ventilation system
20 Troubleshoot electrical wiring and equipment
21 Troubleshoot equipment failure
22 Calibrate equipment
23 Maintain service records
24 Prepare equipment for off-season storage
25 Clean and fumigate storage facility

DUTY I: Performing General Office Work

TASKS:
1 Process incoming telephone calls
2 Process outgoing telephone calls
3 Clean work area

DUTY J: Maintaining and Constructing Structures

TASKS:
1 Paint exterior surfaces of buildings
2 Paint interior surfaces
3 Repair and glaze windows and greenhouse lights
4 Perform maintenance inspection of facilities
5 Repair roofing and gutters
6 Repair siding
7 Repair doors and entry ways

DUTY K: Managing the Business

TASKS:
1 Select computer software for records and reports
2 Select computer software for horticulture applications

Employability skills are a vital component of vocational education programs and should be incorporated into each occupational task list.

DUTY A: Propagating Plants, Seeds and Cuttings

TASKS:
1 Plan planting schedules
2 Clean seed
3 Plant seed in flats or growing benches
4 Plant bulbs
5 Transplant seedlings using a hand transplanter
6 Monitor plant growth
7 Thin nursery stock
8 Lay sod
9 Maintain sod
10 Prepare plants and cuttings for propagation
11 Take cuttings
12 Stick cuttings
13 Label planted specimens
14 Plant trees and shrubs
15 Prepare seed for resting period
16 Provide winterization of plants
17 Select seed varieties

DUTY B: Preparing Soils and Planting Media

TASKS:
1 Mix fertilizer into media
2 Construct open drainage ditch
3 Prepare seedbed
4 Level or smooth planting area
5 Mark off location of beds
6 Shape or form beds
7 Mark off planting spaces with bedwire

DUTY C: Controlling Plant Environment

TASKS:
1 Control growth rate by applying retardant
2 Control light requirements by using shade cloth
3 Cultivate plants
4 Water plants and nursery stock
5 Apply mulches
6 Control pests
7 Treat diseased plants, bulbs and corms
8 Remove diseased plants
9 Plan conservation practices
10 Aerate compacted soil
11 Report disease and spray damage

DUTY D: Applying Fertilizer and Chemicals

TASKS:
1 Calculate fertilizer and chemical applications
2 Formulate fertilizer
3 Calibrate fertilizer application equipment
4 Collect soil sample for fertility test
5 Test soil
6 Make fertilizer and lime recommendations
7 Assess crop nutrient deficiencies

8 Treat nutrient deficiencies
9 Identify chemical injury of plants
10 Calibrate chemical equipment
11 Mix chemicals
12 Time chemical applications
13 Store chemicals
14 Perform safety checks on equipment
15 Transport chemicals
16 Map chemical applications
17 Compute fertilizer costs
18 Apply fertilizer using watering system
19 Select chemicals for specific problems
20 Compute chemical costs
21 Maintain chemical inventory file
22 Determine insurance coverage needs
23 Administer first aid

DUTY E: Harvesting Plants

TASKS: 1 Dig shrubs and trees
2 Ball and burlap shrubs and trees
3 Grade plants
4 Label harvested plants by common names

DUTY F: Storing, Shipping and Taking Inventory

TASKS: 1 Bundle plants
2 Wrap plants
3 Pack plants
4 Bunch plants
5 Pack shrubs
6 Care for overwintering of container grown plants
7 Check received merchandise against invoice listing
8 Keep current inventory of products for sale
9 Load truck and trailer for drop shipment
10 Transport products
11 Package orders for shipment
12 Store received supplies

DUTY G: Designing/Installing Landscapes

TASKS: 1 Obtain plants
2 Follow landscape plan in installing plants
3 Plant trees
4 Plant shrubs
5 Plant ground covers
6 Seed lawns
7 Select plants
8 Design corner planting/paper and pencil
9 Design corner planting/landscape software
10 Design line planting/paper and pencil
11 Design line planting/landscape software
12 Design foundation planting/paper and pencil

13 Design foundation planting/landscape software
14 Design landscape plan/paper and pencil
15 Design landscape plan/landscape software
16 Construct landscape model
17 Price landscape design
18 Read landscape plan
19 Set landscaping stones

DUTY H: Servicing and Maintaining Equipment and Facilities

TASKS:
1 Service tillage preparation equipment
2 Service planting equipment
3 Service cultivating equipment (clean, lubricate and adjust chain drive)
4 Service harvesting equipment
5 Service conveyance systems
6 Service tires
7 Service utility tractor
8 Service business vehicle
9 Service small four cycle and two cycle engines
10 Maintain hand tools
11 Service sprinkler system by replacing valves and gaskets
12 Clean dusters
13 Replace greenhouse fan
14 Clean sprayers
15 Install sprinkler heads, nozzles and other irrigation equipment
16 Clean work and delivery areas
17 Lubricate and adjust power equipment
18 Service ventilation system
19 Troubleshoot electrical wiring and equipment
20 Troubleshoot equipment failure
21 Calibrate equipment
22 Maintain service records
23 Order equipment parts
24 Prepare equipment for off-season storage

DUTY I: Performing General Office Work

TASKS:
1 Process incoming telephone calls
2 Process outgoing telephone calls
3 Clean work area
4 File materials
5 Type reports
6 Process incoming mail
7 Process outgoing mail
8 Maintain mailing list
9 Schedule appointments and meetings
10 Repair minor malfunctions of office equipment
11 Duplicate materials
12 Establish filing system
13 Establish file index
14 Prepare bank deposits

15 Reconcile bank statements
16 Write field reports
17 Order supplies and equipment
18 Establish a payroll system
19 Prepare payroll

DUTY J: Performing Sales Duties

TASKS:
1 Conduct sale
2 Close sale
3 Plan territory management
4 Complete business forms
5 Determine customer needs
6 Conduct sales meetings
7 Identify potential buyers
8 Provide customers with technical assistance
9 Recommend plant maintenance procedures
10 Prepare sales options
11 Secure consumer approval for the sales option
12 Implement approved sales option
13 Evaluate sales process
14 Plan marketing strategy
15 Develop promotional aids
16 Prepare plants for sale
17 Process telephone orders
18 Prepare invoices
19 Assist customer in locating merchandise
20 Inform customer of warrantee and guarantee specifications
21 Compute sales tax
22 Complete sales slip

DUTY K: Performing Sales-Related Duties

TASKS:
1 Greet and meet people
2 Maintain customer file system
3 Interpret market information
4 Label and price products
5 Prepare advertisements
6 Code and date merchandise
7 Rotate horticulture and nursery products

DUTY L: Maintaining and Constructing Structures

TASKS:
1 Paint exterior surfaces of buildings
2 Paint interior surfaces
3 Repair and glaze windows and greenhouse lights
4 Perform maintenance inspection of facilities
5 Repair roofing and gutters
6 Repair siding
7 Repair doors and entry ways

DUTY M: Managing the Business

TASKS:
1 Maintain business records
2 Prepare financial statements
3 Interpret financial statements
4 Complete the business loan application process
5 Develop credit plan
6 Prepare budget
7 Prepare tax statements
8 Prepare depreciation schedule
9 Calculate net worth
10 Develop land use program
11 Supervise agriculture workers
12 Orient new employees
13 Plan work schedules
14 Determine labor needs
15 Train workers using demonstration-performance method
16 Evaluate employee performance
17 Prepare reports
18 Develop business agreements
19 Develop marketing plan
20 Utilize a computerized network on agricultural marketing and management
21 Prepare periodic reports and financial statements using computer system
22 Input accounting entries in computerized bookkeeping system
23 Establish computerized inventory control system
24 Analyze financial statements using financial ratios
25 Select a bookkeeping/accounting system

Employability skills are a vital component of vocational education programs and should be incorporated into each occupational task list.

DUTY A: Propagating Plants, Seeds and Cuttings

TASKS:
1 Plan planting schedules
2 Clean seed
3 Plant seed in flats or growing benches
4 Plant seed using plate type planter
5 Plant seed using air type planter
6 Plant seed using a precision small seed type planter
7 Plant bulbs
8 Transplant seedlings using a hand transplanter
9 Transplant seedling fruit trees using a hole digger
10 Transplant seedlings using a wheel type transplanter
11 Transplant using a hand transplanter
12 Monitor plant growth
13 Thin nursery stock
14 Lay sod
15 Maintain sod
16 Prepare plants and cuttings for propagation
17 Take cuttings
18 Stick cuttings
19 Label planted specimens
20 Plant trees and shrubs
21 Prepare seed for resting period
22 Provide winterization of plants
23 Select seed varieties
24 Transplant cuttings

DUTY B: Preparing Soils and Planting Media

TASKS:
1 Shred planting media
2 Screen planting media
3 Mix media materials
4 Pasteurize prepared media with steam
5 Pasteurize media with chemicals
6 Sterilize (pasteurize) soil in field
7 Mix fertilizer into media
8 Construct open drainage ditch
9 Prepare seedbed
10 Level or smooth planting area
11 Mark off location of beds
12 Shape or form beds
13 Mark off planting spaces with bedwire

DUTY C: Controlling Plant Environment

TASKS:
1 Control growth rate by applying retardant
2 Control light requirements by using shade cloth
3 Control temperature by setting thermostat
4 Cultivate plants
5 Water plants and nursery stock
6 Apply mulches
7 Control pests
8 Treat diseased plants, bulbs and corms
9 Remove diseased plants

10 Set time clock for automatic mist propagation system
11 Aerate compacted soil
12 Pinch and disbud flowering plants
13 Force bulbs
14 Report disease and spray damage

DUTY D: Cultivating and Irrigating Vegetable and Fruit Crops

TASKS:
1 Cultivate crops using chisel type plow
2 Cultivate crops using disk harrow
3 Cultivate crops using spike harrow
4 Cultivate crops using sweep type plow
5 Set up overhead irrigation system
6 Cultivate using rolling cultivator
7 Cultivate using power hoe

DUTY E: Applying Fertilizer and Chemicals

TASKS:
1 Calculate fertilizer and chemical applications
2 Formulate fertilizer
3 Calibrate fertilizer application equipment
4 Collect soil sample for fertility test
5 Test soil
6 Make fertilizer and lime recommendations
7 Assess crop nutrient deficiencies
8 Treat nutrient deficiencies
9 Identify chemical injury of plants
10 Calibrate chemical equipment
11 Mix chemicals
12 Time chemical applications
13 Store chemicals
14 Perform safety checks on equipment
15 Transport chemicals
16 Map chemical applications
17 Apply fertilizer using watering system
18 Apply fertilizer using an auger type distributor
19 Apply fertilizer using cyclone type spreader
20 Apply fertilizer using drill type distributor
21 Apply fertilizer using liquid applicator
22 Apply chemicals using boom type sprayer
23 Apply chemicals using fumigant injector
24 Apply chemicals using air blast sprayer
25 Administer first aid

DUTY F: Harvesting Plants

TASKS:
1 Dig shrubs and trees
2 Ball and burlap shrubs and trees
3 Label harvested plants by common names
4 Harvest seeds
5 Harvest bareroot stock
6 Dig bulbs and corms
7 Clean and size harvested bulbs and corms

8 Dry harvested bulbs and corms
9 Cut flowers and ferns
10 Count, grade and bunch flowers and ferns
11 Prepare and place cut flowers in water or preservative
12 Remove saleable plants from beds
13 Remove bed wire from harvested areas
14 Mark trees to be harvested

DUTY G: Harvesting Vegetable Crops

TASKS:
1 Pick small fruits
2 Pick tree fruits
3 Pick bush fruits
4 Pick bush vegetables
5 Pick vine vegetables
6 Deliver baskets or boxes to grader or market
7 Load pallets on truck or trailer

DUTY H: Grading and Packaging Fruit and Vegetable Crops

TASKS:
1 Adjust a grader
2 Wash and grade crops
3 Cool crops using a cooler room
4 Set up grader

DUTY I: Maintaining and Protecting Fruit Trees

TASKS:
1 Maintain a mechanical topper
2 Prune trees for frame
3 Perform annual pruning for shape and fruit set
4 Top fruit trees using a mechanical topper

DUTY J: Storing, Shipping and Taking Inventory

TASKS:
1 Bundle plants
2 Wrap plants
3 Pack plants
4 Bunch plants
5 Pack shrubs
6 Care for overwintering of container grown plants
7 Check received merchandise against invoice listing
8 Keep current inventory of products for sale
9 Load truck and trailer for drop shipment
10 Transport products
11 Package orders for shipment
12 Store received supplies
13 Assemble shipping cartons
14 Load and unload bagged and bulk materials
15 Store floral and foliage plants in cold storage units

DUTY K: Designing/Installing Landscapes

TASKS:
1 Follow landscape plan in installing plants
2 Plant trees
3 Plant shrubs
4 Plant ground covers
5 Set landscaping stones

DUTY L: Maintaining and Improving Grounds

TASKS:
1 Aerify turf
2 Verticut turf
3 Apply topdressing to turf
4 Overseed turf
5 Mow grounds
6 Trim hedges
7 Trim lawn edges
8 Irrigate lawns
9 Prune trees
10 Prune plants, hedges, and shrubs
11 Sod worn spots in lawn
12 Clean ornamental pools

DUTY M: Servicing and Maintaining Equipment and Facilities

TASKS:
1 Service tillage preparation equipment
2 Service planting equipment
3 Service cultivating equipment (clean, lubricate and adjust chain drive)
4 Service harvesting equipment
5 Service conveyance systems
6 Service tires
7 Service utility tractor
8 Service business vehicle
9 Service small four cycle and two cycle engines
10 Maintain hand tools
11 Service sprinkler system by replacing valves and gaskets
12 Clean dusters
13 Replace greenhouse fan
14 Clean sprayers
15 Install sprinkler heads, nozzles and other irrigation equipment
16 Clean work and delivery areas
17 Lubricate and adjust power equipment
18 Service ventilation system
19 Troubleshoot electrical wiring and equipment
20 Troubleshoot equipment failure
21 Calibrate equipment
22 Maintain service records
23 Order equipment parts
24 Service electrical controls
25 Perform routine maintenance and repairs

26 Service electric motors
27 Prepare equipment for off-season storage
28 Clean and fumigate storage facility

DUTY N: Performing General Office Work

TASKS: 1 Process incoming telephone calls
2 Process outgoing telephone calls
3 Clean work area
4 Order supplies and equipment

DUTY O: Performing Sales Duties

TASKS: 1 Prepare plants for sale
2 Prepare floral arrangements
3 Process telephone orders
4 Prepare invoices
5 Assist customer in locating merchandise

DUTY P: Maintaining and Constructing Structures

TASKS: 1 Paint exterior surfaces of buildings
2 Paint interior surfaces
3 Repair and glaze windows and greenhouse lights
4 Construct hot beds
5 Construct cold frames
6 Perform maintenance inspection of facilities
7 Repair roofing and gutters
8 Repair siding
9 Repair doors and entry ways
10 Maintain ventilation systems of buildings
11 Replace plastic covering on greenhouse structures
12 Repair wooden portions of greenhouse superstructure
13 Replace damaged sections of structures and plastic coverings
14 Replace damaged support wires for black cloth and plastic coverings
15 Repair wooden greenhouse benches
16 Construct a packing shed

Employability skills are a vital component of vocational education programs and should be incorporated into each occupational task list.

SALESPERSON, HORTICULTURE AND NURSERY PRODUCTS

DUTY A: Controlling Plant Environment

TASKS:
1 Control growth rate by applying retardant
2 Control light requirements by using shade cloth
3 Control temperature by setting thermostat
4 Cultivate plants
5 Water plants and nursery stock
6 Apply mulches
7 Control pests
8 Treat diseased plants, bulbs and corms
9 Remove diseased plants
10 Plan conservation practices
11 Force bulbs
12 Report disease and spray damage

DUTY B: Applying Fertilizer and Chemicals

TASKS:
1 Calculate fertilizer and chemical applications
2 Formulate fertilizer
3 Calibrate fertilizer application equipment
4 Collect soil sample for fertility test
5 Test soil
6 Make fertilizer and lime recommendations
7 Assess crop nutrient deficiencies
8 Treat nutrient deficiencies
9 Identify chemical injury of plants
10 Calibrate chemical equipment
11 Mix chemicals
12 Time chemical applications
13 Store chemicals
14 Perform safety checks on equipment
15 Transport chemicals
16 Map chemical applications
17 Compute fertilizer costs
18 Apply fertilizer using watering system
19 Select chemicals for specific problems
20 Compute chemical costs
21 Maintain chemical inventory file
22 Administer first aid
23 Dispose of chemicals and containers according to manufacturer's specifications

DUTY C: Harvesting Plants

TASKS:
1 Grade plants
2 Label harvested plants by common names
3 Count, grade and bunch flowers and ferns

DUTY D: Storing, Shipping and Taking Inventory

TASKS:
1 Bundle plants
2 Wrap plants
3 Pack plants

4 Bunch plants
5 Pack shrubs
6 Check received merchandise against invoice listing
7 Keep current inventory of products for sale
8 Package orders for shipment
9 Write sales receipt

DUTY E: Designing/Installing Landscapes

TASKS:
1 Select plants
2 Design corner planting/paper and pencil
3 Design corner planting/landscape software
4 Design line planting/paper and pencil
5 Design line planting/landscape software
6 Design foundation planting/paper and pencil
7 Design foundation planting/landscape software
8 Design landscape plan/paper and pencil
9 Design landscape plan/landscape software
10 Construct landscape model
11 Price landscape design
12 Read landscape plan

DUTY F: Servicing and Maintaining Equipment and Facilities

TASKS:
1 Service business vehicle
2 Service small four cycle and two cycle engines
3 Maintain hand tools
4 Service sprinkler system by replacing valves
5 Clean work and delivery areas
6 Service electrical outlets and extensions
7 Calibrate equipment
8 Maintain service records
9 Order equipment parts
10 Perform routine maintenance and repairs
11 Establish service records
12 Clean and fumigate storage facility

DUTY G: Performing General Office Work

TASKS:
1 Process incoming telephone calls
2 Process outgoing telephone calls
3 Clean work area
4 Type reports
5 Process incoming mail
6 Process outgoing mail
7 Maintain mailing list
8 Schedule appointments and meetings
9 Repair minor malfunctions of office equipment
10 Duplicate materials
11 Establish filing system
12 Establish file index
13 Prepare bank deposits
14 Write field reports

DUTY H: Performing Sales Duties

TASKS:
1 Conduct sale
2 Close sale
3 Plan territory management
4 Complete business forms
5 Determine customer needs
6 Conduct sales meetings
7 Identify potential buyers
8 Provide customers with technical assistance
9 Recommend plant maintenance procedures
10 Prepare sales options
11 Secure consumer approval for the sales option
12 Implement approved sales option
13 Evaluate sales process
14 Plan marketing strategy
15 Develop promotional aids
16 Prepare plants for sale
17 Prepare floral arrangements
18 Process telephone orders
19 Assist customer in locating merchandise
20 Inform customer of warrantee and guarantee specifications
21 Compute sales tax
22 Complete sales slip

DUTY I: Performing Sales-Related Duties

TASKS:
1 Open store or department
2 Process cash sales transaction
3 Process debit card sales transaction
4 Process charge card sales transaction
5 Package customer purchase
6 Process customer complaint
7 Close out cash register
8 Close store or department
9 Process customer returned sales
10 Greet and meet people
11 Maintain customer file system
12 Label and price products
13 Prepare advertisements
14 Rotate horticulture and nursery products

DUTY J: Managing the Business

TASKS:
1 Maintain business records
2 Develop credit plan
3 Plan work schedules
4 Determine labor needs
5 Train workers using demonstration-performance method
6 Prepare reports
7 Develop marketing plan
8 Maintain inventory records
9 Select computer software for records and reports

10 Select computer software for horticulture applications
11 Utilize a computerized network on agricultural marketing and management
12 Prepare periodic reports and financial statements using computer system
13 Input accounting entries in computerized bookkeeping system

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Education For Employment Task Lists

Illinois State Board of Education

Adult Vocational and Technical Education

AGRICULTURAL OCCUPATIONS

Farm Equipment Mechanic

*Employability Skills

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DUTY A: Identifying Employment Opportunities

SKILLS:
1 Identify requirements for job
2 Investigate educational opportunities
3 Investigate occupational opportunities
4 Locate resources for finding employment
5 Confer with prospective employers
6 Identify job trends

DUTY B: Applying Employment Seeking Skills

SKILLS:
1 Locate job openings
2 Document skills and abilities (resume)
3 Prepare for interview
4 Participate in interview
5 Complete required tests
6 Complete required forms
7 Write application letter
8 Write follow-up letter
9 Write acceptance letter
10 Evaluate job offer
11 Evaluate job rejection

DUTY C: Interpreting Employment Capabilities

SKILLS:
1 Match interest to job area
2 Match aptitudes to job area
3 Verify abilities
4 Identify immediate work goal
5 Develop career plan

DUTY D: Demonstrating Appropriate Work Behavior

SKILLS:
1 Exhibit dependability
2 Demonstrate punctuality
3 Follow rules and regulations
4 Recognize the consequences of dishonesty
5 Complete assignments in accurate and timely manner
6 Control emotions
7 Assume responsibility for own decisions and actions
8 Exhibit pride and loyalty
9 Exhibit ability to handle pressures and tensions
10 Demonstrate ability to set priorities
11 Demonstrate problem-solving skills

DUTY E: Maintaining Safe and Healthy Environment

SKILLS:
1 Comply with safety and health rules
2 Select correct tools and equipment
3 Utilize equipment correctly

4 Use appropriate action during emergencies
5 Maintain clean and orderly work area
6 Demonstrate personal hygiene and cleanliness

DUTY F: Maintaining Business-Like Image

SKILLS: 1 Participate in company or agency orientation
2 Demonstrate knowledge of company or agency products and services
3 Exhibit positive behavior
4 Read current job-related publications
5 Support and promote employer's company image and purpose
6 Maintain appearance to comply with company standards

DUTY G: Maintaining Working Relationships with Others

SKILLS: 1 Work productively with others
2 Show empathy, respect and support for others
3 Demonstrate procedures and assist others when necessary
4 Recognize, analyze and solve or refer problems
5 Minimize occurrence of problems
6 Channel emotional reaction constructively

DUTY H: Communicating on the Job

SKILLS: 1 Read and comprehend written communications and information
2 Use correct grammar
3 Speak effectively with others
4 Use job-related terminology
5 Listen attentively
6 Write legibly
7 Use telephone etiquette
8 Follow written and oral directions
9 Ask questions
10 Locate information in order to accomplish task
11 Prepare written communication
12 Utilize keyboarding skills
13 Utilize computer skills

DUTY I: Adapting to Change

SKILLS: 1 Recognize need to change
2 Demonstrate willingness to learn
3 Demonstrate flexibility
4 Participate in continuing education
5 Seek work challenges
6 Adjust career goals/plan as needed

DUTY J: Understanding How a Business Works

SKILLS:
1 Recognize the role of business in the enterprise system
2 Identify general responsibilities of employees
3 Identify general responsibilities of management/employers
4 Investigate opportunities and options for business ownership
5 Identify planning processes needed to open a business
6 Participate in meetings

DUTY K: Performing Mathematical Skills

SKILLS:
1 Apply mathematics for problem solving
2 Add and subtract whole numbers, decimals and fractions
3 Multiply and divide whole numbers, decimals and fractions
4 Convert numbers between forms expressed as fractions, decimals and percents
5 Convert between standard American units of measure
6 Convert between standard American units and metric units

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FARM EQUIPMENT MECHANIC

DUTY A: Assembling Equipment

TASKS:
1 Assemble primary tillage equipment
2 Assemble secondary tillage equipment
3 Assemble planting equipment
4 Assemble cultivation and weed control equipment
5 Assemble fertilizing equipment
6 Assemble corn harvesting equipment
7 Assemble forage harvesting equipment
8 Assemble grain harvesting equipment
9 Assemble hay harvesting equipment
10 Assemble crop processing equipment

DUTY B: Performing Administrative Functions

TASKS:
1 Assign jobs
2 Complete initial service data on invoice
3 Complete service invoice
4 Complete work order
5 Prepare written cost estimate of repair work for customer
6 Interview customer to obtain description of problem
7 Obtain in-stock repair parts through catalog search
8 Complete requisition to order not-in-stock repair parts
9 Prepare warranty claim
10 Establish and maintain service record
11 Plan work schedule
12 Determine labor needed
13 Prepare for peak work loads
14 Maintain quality control records
15 Maintain work area
16 Write sales receipt
17 Enter service order into computerized inventory system
18 Locate identify parts using micro-fiche system
19 Report problems to supervisor
20 Complete job status report
21 Maintain labor records

DUTY C: Servicing Bearings and Seals

TASKS:
1 Realign shaft and bearings
2 Replace bearings
3 Replace dynamic seals
4 Replace plain bearings (bushings)
5 Replace static seals
6 Troubleshoot bearings

DUTY D: Servicing Power Transfer Systems

TASKS:
1 Adjust chains
2 Adjust belts
3 Repair chains
4 Repair variable speed drives
5 Align chain and sprocket

6 Clean and lubricate chain
7 Clean sprocket
8 Install chain idler
9 Replace belt sheave
10 Replace V-belts
11 Replace flat pickup drive belt
12 Replace sprocket
13 Replace elevator paddles
14 Replace speed control
15 Replace hydrostatic drive charge pressure control valve
16 Replace hydrostatic drive charge pump
17 Replace hydrostatic drive directional control valve
18 Replace hydrostatic drive high pressure relief valve
19 Grease gearbox
20 Install oil gaskets
21 Install oil seals
22 Replace clutch friction disk
23 Replace countershaft
24 Replace transmission case
25 Replace planetary gear
26 Replace shaft
27 Replace synchronizing unit
28 Replace universal joint
29 Adjust clutch linkage
30 Replace gear drives

DUTY E: Servicing Hydraulics

TASKS: 1 Adjust pressure relief valve
2 Bleed air from hydraulic system
3 Change hydraulic filter
4 Flush hydraulic system
5 Drain and refill hydraulic system
6 Hone hydraulic cylinder walls
7 Replace check valve
8 Replace hydraulic hoses
9 Replace hydraulic cylinders
10 Replace hydraulic fittings
11 Replace hydraulic lines
12 Replace hydraulic piston
13 Replace packing
14 Repair hydraulic motors
15 Replace hydraulic pumps
16 Service hydraulic valves
17 Repair hydraulic pumps
18 Troubleshoot hydraulic actuator
19 Replace hydraulic actuator
20 Troubleshoot pressure regulators
21 Inspect pressure control valves
22 Null hydraulic servo valve
23 Test accumulator charge
24 Recharge accumulator
25 Replace defective accumulator
26 Troubleshoot heat exchanger
27 Measure pressure within hydraulic system

28 Measure flow within hydraulic system
29 Troubleshoot hydraulic systems
30 Interpret control diagrams for hydraulic systems
30 Diagnose malfunctions of hydraulic systems using test and measurement equipment
31 Connect hydraulic components to machines

DUTY F: Servicing Brake Systems

TASKS:
1 Adjust brakes
2 Replace brake pads
3 Repair brake master cylinder
4 Replace brake master cylinder
5 Install brakes

DUTY G: Servicing Carburetion and Fuel Systems

TASKS:
1 Bleed diesel fuel system
2 Clean diesel fuel injector
3 Rebuild carburetor
4 Replace diesel injection pump
5 Replace diesel injector nozzles
6 Replace fuel pump
7 Replace turbocharger
8 Check and adjust timing on diesel fuel injection pump
9 Adjust carburetor
10 Install carburetor

DUTY H: Servicing Cooling and Lubrication Systems

TASKS:
1 Seal leak in cooling system
2 Replace cooling system thermostat
3 Replace oil cooler
4 Replace oil filter
5 Replace oil pressure gauge
6 Replace oil pump
7 Replace radiator
8 Replace water pump
9 Rebuild oil pump
10 Flush cooling system
11 Prepare engine for off-season storage
12 Service lubrication system
13 Service cooling system

DUTY I: Servicing Electrical Systems

TASKS:
1 Adjust voltage regulator
2 Replace alternator regulator
3 Replace amperage meter
4 Replace diode
5 Replace generator brushes
6 Replace alternator heat sink

7 Polish commutator
8 Rebuild distributor
9 Rebuild starter
10 Replace alternator bearings
11 Replace distributor points and condenser
12 Replace ignition coil
13 Replace ignition distributor
14 Replace starter armature shaft bushing
15 Replace ignition wires
16 Replace starter brushes
17 Replace starter drive assembly
18 Replace starter motor
19 Replace starter motor solenoid
20 Set breaker point dwell
21 Set ignition timing
22 Troubleshoot electrical system
23 Activate and charge battery
24 Clean battery terminals
25 Change battery
26 Service fuse box
27 Gap plugs and points
28 Change plugs and points
29 Service electrical system
30 Service equipment monitoring unit

DUTY J: Servicing Internal Combustion Engines

TASKS:
1 Replace crankshaft
2 Replace main bearings
3 Replace rod bearings
4 Replace timing chain/gears
5 Replace camshaft and camshaft bearings
6 Replace dry sleeves
7 Replace piston rings
8 Replace rocker arms/shaft
9 Replace wet sleeves
10 Replace piston
11 Adjust valves
12 Replace engine block
13 Replace cylinder head
14 Repair piston assembly
15 Replace cylinder head gasket
16 Recondition valves and valve seats
17 Remove cylinder ridge
18 Hone and/or deglaze cylinder
19 Repair exhaust system
20 Replace exhaust system

DUTY K: Servicing Tires

TASKS:
1 Demount large implement tire
2 Demount small implement tire with machine
3 Demount small implement tire without machine
4 Demount tire with split rim

5 Mount tire
6 Repair tube puncture
7 Repair tubeless tire puncture
8 Service tire with fluid

DUTY L: Servicing Mechanical Components of Balers

TASKS:
1 Replace round baler compression roll spring
2 Replace round baler floor and floor channel
3 Replace round baler rollers
4 Adjust round baler knife arm
5 Adjust twine baler needles
6 Adjust twine baler slip clutches
7 Adjust twine baler tucker fingers
8 Adjust twine baler disc
9 Adjust twine baler bale care tension
10 Replace twine baler bill hook
11 Replace hay dog springs
12 Replace twine baler pin in bill hook pinion
13 Replace twine baler finger rod
14 Replace twine baler knife
15 Sharpen twine baler knife cutting edge
16 Time feeder
17 Time plunger
18 Replace round baler belts

DUTY M: Servicing Mechanical Components of Combines and Harvesters

TASKS:
1 Stablize concave leveling mechanism
2 Replace concave
3 Replace cutterbar on combine
4 Replace feeder conveyor
5 Replace gathering chains
6 Interchange combine grain and corn head
7 Replace cylinder rotor on combine
8 Replace bars on snapping plates on combine
9 Replace straw walkers
10 Replace threshing cylinder
11 Replace threshing fans
12 Adjust corn harvester cylinder to concave
13 Adjust cylinder cut-off bar
14 Adjust drag chains and links
15 Adjust elevator chains
16 Adjust floating shoes
17 Adjust reel speed
18 Adjust sieves
19 Adjust snapping rolls
20 Adjust stripper plates
21 Adjust table balance springs
22 Lubricate feeder chain
23 Adjust slip clutches
24 Replace snapping rolls
25 Time gathering chains
26 Replace cutterbar on mower-conditioner/windrower

27 Replace guard on mower-conditioner/windrower
28 Replace hay conditioner universal joints
29 Replace mower knife sections
30 Replace mower ledger plates
31 Replace mower wear plates

DUTY N: Servicing Mechanical Components of Planters

TASKS:
1 Replace disc furrow covers
2 Adjust furrow covers
3 Adjust hitch
4 Adjust row marker
5 Adjust furrow opener
6 Replace plate type sprockets
7 Calibrate seed placement rate
8 Calibrate pressurized air seed metering system
9 Calibrate finger-pickup seed metering system
10 Calibrate seed-plate metering system
11 Adjust for desired depth of seed placement
12 Adjust attachments
13 Install monitor assembly
14 Service and troubleshoot monitor assembly
15 Troubleshoot field problem

DUTY O: Performing Oxy-fuel (OAW) Welding

TASKS:
1 Select oxy-fuel welding gas and filler metal according to job
2 Change cylinders and adjust oxy-fuel manifold
3 Set up portable oxy-fuel welding equipment
4 Perform minor maintenance on oxy-fuel welding equipment
5 Weld 1/8" mild steel in flat position
6 Weld 1/8" mild steel in horizontal position
7 Weld 1/8" mild steel in vertical position
8 Weld 1/8" mild steel in overhead position
9 Braze ferrous metal
10 Braze non-ferrous metal
11 Heat and bend metal to specifications
12 Heat metal parts to assist in removal
13 Build up surfaces
14 Hard face surfaces

DUTY P: Performing Thermal Cutting Operations

TASKS:
1 Set up portable oxy-fuel cutting equipment
2 Cut steel by hand using oxy-fuel cutting equipment
3 Cut and pierce metal with shielded metal arc welding equipment

DUTY Q: Performing Shielded Metal Arc Welding (SMAW)

TASKS:
1 Select shielded metal arc welding equipment and electrodes according to job
2 Set up shielded metal arc welding equipment
3 Perform minor maintenance on shielded metal arc welding equipment
4 Weld 3/16" mild steel in flat position
5 Weld 3/16" mild steel in horizontal position
6 Weld 3/16" mild steel in vertical position
7 Weld 3/16" mild steel in overhead position
8 Weld single vee-grove butt joint on 3/8" steel plate

DUTY R: Performing Gas Metal Arc Welding (GMAW)

TASKS:
1 Select gas metal arc welding equipment, filler metal and gases according to job
2 Set up gas metal arc welding equipment
3 Perform minor maintenance on gas metal arc welding equipment
4 Weld 3/16" mild steel in flat position
5 Weld 3/16" mild steel in horizontal position
6 Weld 3/16" mild steel in vertical position
7 Weld 3/16" mild steel in overhead position
8 Weld single vee-groove butt joint on 3/8" steel plate

DUTY S: Applying Safety Practices

TASKS:
1 Comply with shop and equipment safety rules
2 Apply basic emergency first aid techniques
3 Complete accident reports
4 Inspect workplace for safe working environment
5 Use fire extinguisher
6 Participate in shop safety committees
7 Correct safety hazards
8 Demonstrate cardiopulmonary resuscitation (CPR) techniques
9 Participate in safety training programs

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